### BUSINESS WEEK

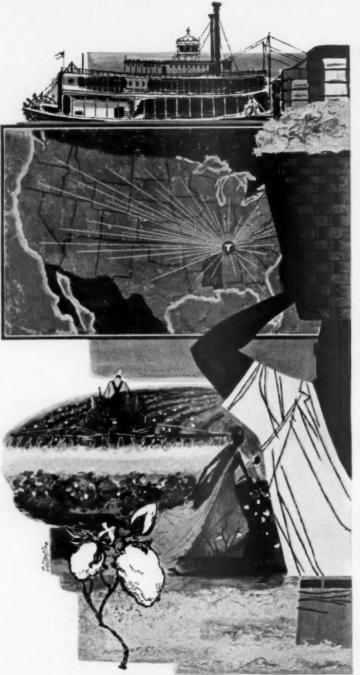
The Oil Stocks?

PAGE 132



APR. 19, 1952

### THERE'S A TOUCH OF TENNESSEE IN MISSISSIPPI COTTON



Old times in Mississippi and throughout Southern cotton fields are not forgotten... times when the boll weevil claimed great portions of the cotton crops. Today dust and spray formulations protect the cotton from boll weevils and other destructive pests. The active chemical in these formulations is Benzene Hexachloride (BHC) which Tennessee Products produces in large quantities.

Protecting cotton is not all that Tennessee does in Mississippi. For instance, Tennessee ships Tensulate Insulation and Tensulate Perlite, a light weight aggregate, for the building industry. And you will find products from Tennessee in every state in the country doing a wide variety of jobs. That's why Tennessee is known from Coast to Coast as the industry that serves all industry.



PRODUCTS & CHEMICAL

Corporation

Producers of: FUELS · METALLURGICAL PRODUCTS · TENSULATE BUILDING PRODUCTS · AROMATIC CHEMICALS WOOD CHEMICALS · AGRICULTURAL CHEMICALS



### Hose gives planes a hot rubdown

### A typical example of B. F. Goodrich product improvement

He's cutting sticky layers of dirt and grease off a plane by a highpowered jet of boiling-hot steam. You can imagine what would happen to the workman if that high-pressure hose should burst!

Oil from the airplane engines picks up field dust, and cakes along the fuselage and under the wings to the point where it actually cuts air speed. To

say nothing of fire hazard!

It took 4 men 4 to 5 hours to brush off the muddy grease.

An equipment maker had an ideasteam carried through flexible hose would cut that grease and dirt. But the heat and needed pressure would ruin ordinary rubber hose in no time, and that meant burst hose, with dreadful, perhaps deadly scalding of workers.

However, B. F. Goodrich had developed a special hose for just such rough-and-tough service. Called Burstproof steam hose, it uses braids of strong steel wire, built right in with the rubber, to prevent dangerous bursts. BFG engineers also developed a new, heat-resisting rubber, to stand the heat and pressure of the steam. Then for good measure they used braided asbestos to replace the cotton of ordinary hose which charred with heat.

The equipment maker tried this new hose. Now one man does the cleaning job in the same time formerly taken by four, and the B. F. Goodrich hose

lasts so long its cost is no factor.

New and improved products like this are the result of B. F. Goodrich emphasis on research. That's why it pays to keep in touch with your B. F. Goodrich distributor for the latest and greatest ways to save with rubber. The B. F. Goodrich Company, Industrial & General Products Division,

### **B.F. Goodrich**

RUBBER FOR INDUSTRY

# 3 MAJOR SAVINGS FOR PURE CARBONIC WITH FRUEHAUF TRAILERS

World's Widest Choice of Trailers Is Your Surest Way to Savings I



Dry Freight Assevans World's Most-Used, Mast-Useful Trailer



Corrugated Aluminum Vens Weight Engineered Out. Strength Is



Stainless Steel Vens Langust Life - Greatest Economy



Tank-Trailors

Pure Carbonic, Incorporated, operates two of these insulated Fruehauf Aerovans for fast transport of dry ice from its plant in Berkeley, California, to the warehouse in Sacramento.

THREE MAJOR SAVINGS result for Pure Carbonic, Incorporated, in its operation of Fruehauf Aerovans for hauling dry ice.

- Costly evaporation is prevented because of rapid, direct delivery and the protection of Fruehauf's coldretaining insulation.
- 2. Expensive freight re-handling is eliminated because Trailer Transport involves only one hauling and handling operation.
- 3. Maintenance costs are low because of sturdy Fruehauf construction. Patented Multi-Rate Suspension effects substantial maintenance savings.

Immediate Factory Branch Service Wherever Your Fruehauf Goest



SAVINGS IN YOUR BUSINESS, plus greater hauling flexibility, are possible with "transportation by Fruehauf." Write for a free "Transportation Cost Analysis" or call your nearest Fruehauf Branch.

World's Largest Builders of Truck-Trailers

FRUEHAUF TRAILER COMPANY DETROIT 32, MICHIGAN

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BUSINESS WEEK . APRIL 19 . NUMBER 1181



Magnaflux plays an important part in building safety into jet engines. With every part a critical part, it is essential that cracks and flaws be discovered at time of production and throughout maintenance, no matter how minute or well hidden.

That's why all jet engine manufacturers use Magnaflux to find hidden defects in metals—to show up cracks too small for the human eye to see. Magnaflux makes invisible cracks instantly visible, even when below the surface, in the making and maintenance of many products-from automobiles to locomotives, from sewing machines to sleeping cars!

Magnaflux is low in cost, nondestructive-and so fast that it performs at production line speeds! For detailed information write for literature—how Magnaflux saves money and lives, described on request without obligation.

MAGNAFLUX CORPORATION 5906 Northwest Hwy. . Chicago 31, Illinois New York . Dallas . Detroit . Cleveland . Les Angeles



### It's still "The Richest Hill on Earth"

For nearly three-quarters of a century, men have called it "the richest hill on earth." And the saga of American mining is written across its face. To this hill came the founders of Anaconda. They left their bootprints in its dirt and dust. And they made Butte, Montana, the copper capital of the world.

Since its first crude shaft was sunk, Butte Hill has yielded a fantastic fortune of more than 18 billion pounds of copper, zinc, lead and manganese... metals, more precious than ever today, that still flow out from the mountain in an endless stream,

Yet in addition to all this wealth of metal, a vast and untapped treasure-house lay deep under Butte Hill... over 130 million tons of ore so low in copper content that the cost of mining it by conventional underground methods would be prohibitive.

Here were more than 2,600,000,000 extra pounds of copper for a metal-hungry America ... copper to build tomorrow's homes and factories and weapons of defense . . . if an economic way could be found for mining it.

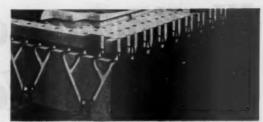
To accomplish this, Anaconda's engineers used an adaptation of "block-caving," a low-



SHOWN HERE is a simplified plan for "block-caving" the huge deposits of low-grade ore under Butte Hill. From the Kelley Shaft, at left, tunnels are driven through the mountain to the ore-bodies at various levels down to 3,400 feet. Ore is already being taken out at the upper, or 600-foot level. The shaft at right is one of soveral used for ventilation.

cost method of mining already in use by the Company in other properties. "Block-caving" involves undercutting the ore deposits with a series of tunnels and holes. After blasting, the ore crumbles and falls of its own weight into cars that haul it away.

This new development, now nearly completed, is costing \$27,000,000. It will insure a far greater supply of the metals so vital to defense, to science and to industry. It is blazing a trail from Butte into your home—and into your future. It is writing the finest chapter in the long history of "the richest hill on earth."



TRANSFER CHUTES are driven from the haulage level to the "undercut" level where miners cut out chambers in the ore to prepare for caving. "Block-caving" will yield 30,000,000 additional pounds of copper in 1952. When in full production, and for years to come, it is expected to produce 90,000,000 pounds annually.



WHEN THE PILLARS are blasted, the ore caves, crumbles and falls through iron grates, or grixxlies, into cars on the haulage level, to be carried to the Kelley Shaft. In addition to the yield from this new project, output of copper, sinc and manganese ores from other areas of Butte Hill continues by usual selective mining methods.



INCREASED PRODUCTION required new facilities for reducing the ore to metal. These, too, have been developed by Anaconda metallurgists. From this refinery, wire-bars, cakes and billets of 99.9% pure copper go to The American Brass Company and to the Anaconda Wire & Cable Company (Anaconda Manufacturing Divisions) to make the finished metal products that are so essential to industry and defense.



PRODUCIES OF: Copper, zinc, lead, silver, gold, platinum, cadmium, vanadium, selenium, superphosphate, manganese ore, ferromanganese.

MANUFACTURERS OF: Electrical wires and cables, copper, brass. Fronze and other copper alloys in such forms as sheet, plate, tube, pipe, rod, wire, forgings, stampings, extrusions, flexible metal hose and tubing.

### Westinghouse Fluorescent Cost You Less Than In 1940, Yet



### MAKING SURE YOU CAN BE SURE... Regularly, cartons are pulled off the production line, opened, and the lamp tested many ways. Another series of spo-checks are made in the warehouse. When you buy a fluorescent lamp, you can be sure... if it's Westinghouse.



ONLY THE PERFECT PASS

Only the perfect survive the many checks made by this skilled worker and her machine. And there are many such inspections in the manufacture of Westinghouse fluorescent lamps.



YOU CAN BE SURE ... IF IT'S

Westinghouse

## Lamps Still They Did Burn Seven Times Longer

### TAKE THE LOW ROAD

Prices are on the high road—about 110 percent higher than in 1940. But the low road isn't gone. Westinghouse fluorescent lamps are on it. They cost less today than in 1940. And they last 7 times longer! That's quality. And the net price to quantity buyers is the lowest in the field. Add it all up, and the sum says—Westinghouse saves you money!

IN 1940 YOU		TODAY YOU PAY
15W T-8	.95	.65
20W T-12	1.25	.80
30W T-8	1.25	.80
40W T-12	1.90	1.00

WESTINGHOUSE LAMP DIVISION . BLOOMFIELD, NEW JERSEY

Lamp Division Westinghouse Electric Corp. Bloomfield, N. J.	Dept. 630
The state of the s	ost of lighting. Please send me
NAME	TITLB
COMPANY	
STREET	
CITY	SONBSTATE

### NEWS FROM WESTINGHOUSE, THE FASTEST-GROWING LAMP MANUFACTURER

by Sam Hibben



### STILL ROOM FOR ADVANCE-

MENT: Science has made vast strides in lighting efficiency (measured by lumen output per watt of power input). Lamps today are up to 15 times as efficient as the old carbon filament incandescent lamp, with fluorescent lamps giving 60 lumens per watt. Near-perfect efficiency would be from 500 to 600 lumens per watt, and the closest thing to that today is the common firefly—he produces 300 to 400 lumens per watt! That still leaves science something to shoot at.

SUCCESS STORY: 'Way last December, a picture was taken in Florida. A photographer set up two lamp bulbs 15 feet apart; one was a standard incandescent, one a Westinghouse Bug-A-Way light bulb. There were plenty of insects about, and the test showed amazing results—the standard bulb attracted horder of bugs, while only one or two were near the Bug-A-Way bulb.

IMAGINE THIS: If you think local traffic is bad, put yourself in the position of an insect who often flies through hedges and trees at speeds above 60 m.p.h. And he never hits a branch, even in a high wind. Of course, he also has some 600 lenses in each eye against only one in yours. Oh well, we'll just have to hobble along.

More next month.

Bamustastiss

AGAIN WESTINGHOUSE MAKES HISTORYI Complete coverage of Presidential Campaign from conventions to election over CBS television and radio.



Stack Twice As High... store twice as much, do it in half the time with Towmotor fork lift trucks. Towmotor handles all types of material. For the name of your nearest Towmotor Representative and a Towmotor Safety KIT—a portfolio of safety tips and colorful plant safety posters—write Towmotor Corporation, Div. 2, 1226 E. 152nd St., Cleveland 10, Ohio.



FORK LIFT TRUCKS and TRACTORS

### READERS REPORT

### Tax Reforms

Dear Sir:

I have read with interest your editorial "Green Light for Reform" [BW—Apr.5°52,p140] and want you to know of my appreciation for the fine support you have given to the work we have been trying to do.

HERBERT HOOVER

NEW YORK, N. Y.

### **Leaky Ceilings**

Sirs:

The article entitled "Leaky Ceiling" [BW—Apr.5'52,p90] . . . exactly reverses the actual situation, as far as certified public accountants are concerned.

CPA firms are not trying to steal men from industry; they are just asking for a chance to keep the men they have

Actually, salary stabilization encourages "pirating" of professional employees instead of preventing it, because it is easy for industry to set up a new position for a new employee at almost any salary while it is difficult or impossible for a professional firm to match an offer an employee has received from someone else.

Professional fees are exempt from price control because there is no equitable way controls could be applied to them. For the same reason, salaries paid to professional employees of firms that operate on a fee basis should be exempt from salary stabilization.

WILLIAM M. BLACK JOHN B. INGLIS

MEMBERS, EXECUTIVE COMMITTEE
AMERICAN INSTITUTE OF ACCOUNTANTS
NEW YORK, N. Y.

### Hard Coal's Hard Times

Dear Sirs:

We invite your attention to several inaccurate statements made in the article "Hard Times in the Hard Coal County" [BW—Mar.22'52,p108].

The picture of the long-abandoned breaker is not typical of breakers in the anthracite region, whether they are either abandoned or still in use.

You state: "Streets of the cities are pitted with holes that there is no money to repair." This is not a correct statement in any sense of the word either locally or generally.....

locally or generally. . . . . Again: "And the area once had magnificent forests. These were long since stripped by rapacious lumbering." This is not a factual statement, and the whole region extending over 480 sq. mi. in



### KELLER RIVETER MORE THAN DOUBLES PRODUCTION

### AN APPLICATION OF KELLER AIR TOOLS

Have you ever wondered who puts all those prongs in the base of your radio tubes? Here he is... an employee of Chatham Electronics Corporation in Newark, N. J.

He puts in all eight pins at once. He sets them in a locating fixture and places the tube base over them, fitting the pins into their respective holes. Then he presses a treadle actuating a Keller Compression Riveter, which stakes the pins solidly in place. Working this way, he turns out 155 pieces an hour.

Formerly he used a kick press instead of the Keller Riveter. With the kick press, his output averaged 62 pieces an hour. The change in tools increased his production two and one half times.

The fact that pneumatic pressure exerts a squeeze—not a slap—gives air power another advantage for jobs like this. Pressure eases the pins into their holes, and reduces spoilage.

This is but one of thousands of instances where Keller Air Tools for staking, riveting, grinding, drilling, hoisting, screw driving, and nut setting have brought greater efficiency and new low cost.



Air Tools engineered to industry

KELLER TOOL COMPANY, GRAND HAVEN, MICH.

AIR MOTORS . AIR HOISTS . AIR HAMMERS . COMPRESSION RIVETERS . GRINDERS . DRILLS . SCREW DRIVERS . NUT SETTERS



Which from your viewpoint is more desirable depends on several considerations. Can you use our standard alloy Bunting No. 72 (S.A.E. 660) or is a special alloy indicated? Can you use our stock dimensions and tolerances or does your design requite a special bearing made expressly for you? Are your quantity needs moderate? If so, the Bunting Standard Stock Bearing offers you the benefit of others' volume. Are your quantity needs substantial? If so, a special Bunting Bronze Bearing will cost no more than a Standard Stock Bearing.

One thing to remember about Bunting Bronze Bearings is this—your design is not penalized by a standardization for some other industry. Some bearing types are standardized to suit one industry and force other industries into straight-jacket designs, but Bunting Bronze Bearings offer freedom and latitude for the design needs of every industry.

The Bunting Brass & Bronze Company, 720 Spencer St., Toledo 1, Ohio • Branches in Principal Cities.



nine counties has many of the most beautiful forests in Pennsylvania.

As you state, many cities in the community are trying to interest new industries in moving to the anthracite region. We do not believe unfounded statements as quoted above will help these communities in their commendable efforts to attract new manufacturers.

The anthracite industry has been seriously hurt by the competition of oil and natural gas. It is waging a gallant fight to hold and expand its markets....

F. W. EARNEST, JR.

PRESIDENT
ANTHRACITE INSTITUTE
WILKES-BARRE, PA.

 BUSINESS WEEK does not believe its article was inaccurate. Many of the basic statistics came from official data of the Commonwealth of Pa. The picture and description of the abandoned breaker was supplied by a BW correspondent in the area.

### **Political Coattails**

Gentlemen:

New Jersey voters who face an important primary here this month found vour article "Throwing Figures Around" [BW—Mar.29'52,p94] of great interest.
Governor Driscoll has made several

Governor Driscoll has made several statements guiding Republicans in this primary, and these are borne out by your careful study. I think Eisenhower backers will find the coattail theory, as you describe Prof. Moos' research, of great value to them. Your article gives the fact borne out in other places that lke is the one man who can win for GOP next fall.

Without doubt, both sides have taken issue with your article. . . .

J. PATRICK GEE

PARAMUS, N. J.

### **Booming** Canada

Sir

As an American citizen resident in Canada for the past five years, I want to express to you my appreciation for the greater attention you have given Canada.

The interest in Canada on the part of U.S. people is a great thing for both countries because no one who has lived in Canada and has seen the solid growth that has been occurring here can teel other than that it is a real land of opportunity. Thanks . . . for the increasing interest that you are stimulating in Canadian affairs.

W. E. WILLIAMS

RESIDENT

PROCTER & GAMBLE CO. OF CANADA, LTD. TORONTO, ONTARIO CANADA

## tailor-made for increased prol

SELF-SERVICE meat packaging, swift and convenient as it is for the buyer, wasn't always so convenient for the seller.

Packaging film that would rip and tear when roughhandled by choosy customers boosted selling costs. If a film was tough enough to stand the gaff, it wasn't transparent enough to display the needed rich red meat appeal.

Then PLIOFILM entered the picture. Goodyear's famous moistureproof film appeared in a new form that added to the usual PLIOFILM advantages an unusual toughness that is ideally suited to meat packaging. Soft and pliable, PLIOFILM conforms to the shape of the meat, without wrinkling, makes an attractive window-clear package.

This new type of PLIOFILM is so strong and punctureresistant, it virtually eliminates rewraps and double wraps. Its yield is greater than conventional films, making it far more economical to use. And by barring moisture gain or loss, it keeps meat fresh and appetizing far longer.

The PLIOFILM positive heat-seal eliminates messy leaking packages-decreases wrapping cost and customer complaints.

What can PLIOFILM do for you? Listen to this:

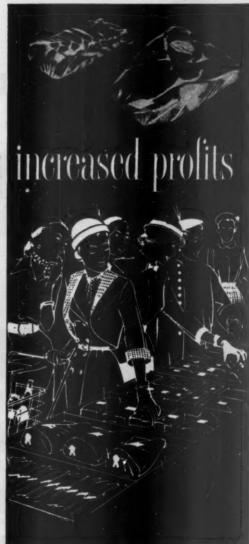
PLIOFILM is air-, moisture-, liquid-proof-keeps wanted moisture in, unwanted moisture out. It has dimensional stability, doesn't pucker or shrink. And its transparency lends gleaming sales appeal to any package.

PLIOFILM is adaptable to all types of machine packaging. It also heat-seals readily with hand tools in packaging at store level.

Want to hear more? Fill out the coupon below and we'll mail you-free of charge-a copy of "Plain Facts About Pliofilm"-a booklet that tells you all you want to know about this moisture proof, transparent film.

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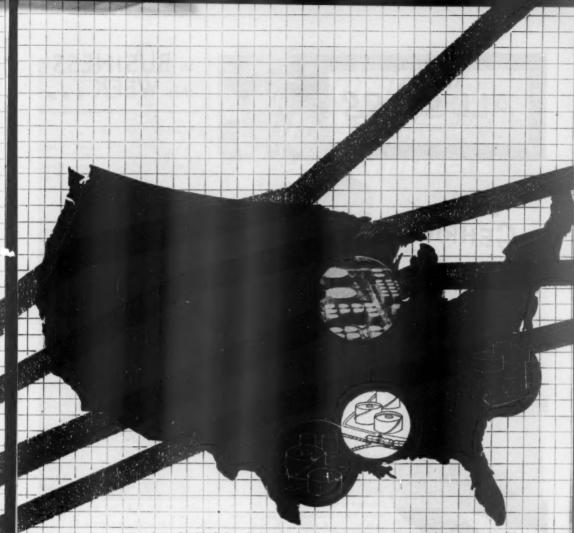


GOOD THINGS ARE BETTER IN



### GENERAL AMERICAN'S LEGSING FACILITIES





The GATX tunk cur floot, designed and built for safe shipment of bulk liquids, now has more than 43,000 cars serviced and maintained in General American's own shops.

The GARX-URTX refrigorator car fleet of more than 11,000 carscontinues to carry eggs, meats, fruits, regetables, beer and otherperishables to market swiftly and economically.

More and more railroads and shippers have found that the GAEX
box car floot of DF cars (demoye-free) is making new records
for safe transportation of all types of fragile products.

New Scots of Trans-Fis cars, the sanitary covered hopper cars for flour and dry chemicals, are in operation for shippers. Besides climinating contamination, they save money by avoiding the cost and handling of individual packages.

Tunk furm feelileles of General American Tank Storage Terminals have been increased by the addition of a big new terminal at Chicago. Now five major markets—Carteret, N.J. (Port of New York), Goodhope, La. (Port of New Orleans), Houston and Corpus Christi, Tex., plus Chicago, III.—offer all the modern equipment you would want in your own bulk liquid storage terminal.

Then you use General American's leasing facilities, you risk no capital—yet use the specialised equipment required for the best kind of shipping and storing. You get all the advantages of private ownership—and you know what your costs will be!

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ATLANTIC BOND

Business PAPER

MADE BY EASTERN CORPORATION . BANGOR, MAINE

Write us on your letterhead for Grantland Rice's complete all-time baseball team, attractively illustrated and suitable for framing.

### In BUSINESS this WEEK ...

### • Green Pastures . . .

· . . . opened up to makers of television sets this week when FCC cleared the way for 2,000 new stations. Here's how they're planning to move in. P. 27

### · Calculations . . .

... by the million. That's what an electronic "brain" can do for industry. So far, only a handful of companies are using them. But prospects for the big electronic computers are bright. P. 38

### · Controls on Money . . .

... are the tools that will unscramble the mess of government operations. The man who's making the controls work—in the Pentagon, no less—is Wilfred J. McNeil, who would like to be anonymous. P. 74

### · Pools . . .

on defense contracts in World War II. But today they're running into troubles. Here's how and why. P. 106

### · Big Reserves . . .

... of bauxite, the ore from which aluminum is made, are being opened up in Jamaica. Reynolds will soon start shipping from these reserves, which are close to the U.S. and are the largest known. P. 154

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■ Among oil men, that fantastic contraption is known as a "Christmas Tree" because of its resemblance in shape. Actually, it's the aboveground portion of a gas well—a series of valves that control the release of gas from underground formations into the pipe line system.

And now the "Christmas Tree" takes on new aignificance. It is helping to relieve the sulfur shortage. At a recently completed sulfur extraction plant at Goldsmith, in west Texas, Phillips Chemical Company will convert the waste hydrogen sulfide, recovered from sour petroleum gases,

into pure sulfur at the rate of 250,000 pounds daily. The sulfur is then converted into sulfuric acid and combined with anhydrous ammonia (which Phillips also manufactures from natural gas) to make available increased amounts of ammonium sulfate fertilizer—important for healthy crops—and at present in short supply on our nation's farms.

Intensive search by Phillips scientists for better ways of using natural gas helped Phillips become one of America's most diversified oil companies.



### PHILLIPS PETROLEUM COMPANY

Phillips Chemical Company, a subsidiary Bartlesville, Oklahoma

We put the Power of Petroleum at America's Service

Industrial
Eye Accidents Cost
110,000,000
Man-Hours in Lost
Productive Time
Alone\*

This form of MANPOWER PIRACY you can control inexpensively!

When eye accidents hit your plant, here's what happens:

 You lose the productive time of the worker and his machine. (One worker and one machine usually — maybe more if they make a critical part.)

 You may face a serious claim actual eases show awards of four figures in compensation.

In addition, industrial eye accidents cost money in lowered production and more rejects when substitute workers step into the breach—plus the direct costs of first aid and medical attention.

Protect your manpower and profits by preventing eye injuries. Contact the nearest AO Branch Office and learn how an AO Eye Protection Program can practically eliminate these costs and pay for itself

in less than six months. Or write American Optical Company, 413 Vision Park, Southbridge, Mass, for free booklet "Improved Industrial Vision" which tells how AO's Industrial Vision Program cuts costs, increases production, decreases accidents.

\*Estimate. Industrial eye injuries cost over \$5 per employed worker per year—with compensation averaging nearly \$400 per injured man.

American Optical



### BUSINESS OUTLOOK

BUSINESS WEEK APRIL 19, 1952



Production of most types of goods for consumers will rise in the next several months—just to support the present level of retail sales.

It must be emphasized again that the level of retail sales has been good. It has exceeded output for the simple reason that everyone has been busily working off inventory.

And if consumer demand picks up—as it very well may—then the upturn at the manufacturer's level will be just that much more robust.

Consumers actually have been spending pretty liberally right along.

Dollar outlays on goods and services were as high in the quarter just ended as a year ago. And the first quarter a year ago was marked not only by a buying spree, but by higher prices than today's.

That, at least, is the story told by Washington's figures. Consumer spending was at an annual rate of \$208.8-billion in the 1951 first quarter; it dropped to \$202.5-billion in the second; now it is \$209-billion.

Spending patterns, admittedly, have varied widely in the last year.

Consumers bought <u>durable goods</u> at an annual rate of \$31.7-billion in the nine months after Korea. The rate ever since has been down in the neighborhood of \$25-billion—a drop of just over 20%.

Spending on nondurables, however, is higher now than a year ago— \$115-billion against \$112-billion (annual rates).

Precisely where the money all went is an open question. There's no breakdown available as yet between foods, appliances, furniture, textiles.

Suppliers of services have been getting a relatively larger portion of consumers' dollars than producers of goods. Just before Korea, their take was figured at \$62-billion a year. Early in 1951 it was \$65½-billion; for the first quarter of this year it was \$69-billion.

Record spending so far this year (if the preliminary estimates prove true) once again brings up the old matter of saving vs. spending.

It would appear that this trend has turned once again.

Dept. of Commerce estimates put personal savings at an annual rate of about \$20-billion all through the last nine months of 1951. That was 9% of income after taxes.

For the first quarter of this year the Council of Economic Advisers figures the rate at  $17\frac{1}{2}$ -billion, or about 7.7% of disposable income.

When is personal saving high? Well, over the period for which we have figures, today's saving at 7.7% of income after taxes would still seem to be somewhat above "normal."

However, such figures are relatively new. And we have little experience with them in a high-level economy.

Maybe real income has outrun needs since mid-1950. Perhaps savings are bound to run at a high rate in times like these.

Our over-all economy (measured in dollars) still is rising. This, despite all the "private recessions" and the price drops of the last year.

Gross national product, which measures the value of all goods produced and services rendered, is put at an annual rate of \$339-billion for the first

BUSINESS WEEK APRIL 19, 1952 quarter of 1952. It ended 1951 at \$334½-billion; a year ago it was \$319½-billion; just before Korea, it was \$275-billion.

Auto output will do well to match demand for the current quarter.

Production rose from 285,000 passenger cars in January to 332,000 in February. Dealers, for the period, sold more than they received.

Output took a further rise to 377,000 in March, Ward's Reports estimates. That was high enough to boost dealers' floor stocks a bit.

But that delicate supply-demand balance was prior to the real selling season. In the April-June period, the industry hopes to produce nearly 1.2-million cars. That almost certainly will be short of dealer sales.

Controls on materials plus model changes are sending auto dealers into the big sales season short of cars. Automotive News estimates those on hand and in transit at only 6.4 per dealer on Apr. 1.

The stock is put at 386,000, against 545,000 a year earlier.

Old-timers say they can sell at lot more than they'll get between now and late summer. But they warn: New dealers—those who don't know what prewar selling was like—will be up to here in cars by September.

They want to see used-car lots in October before predicting the winter's sales; new cars might sell well and used cars still pile up.

Home building is getting a real look of spring about it.

No longer is it mostly a matter of work being put in place now on homes begun last year. This is strictly 1952's own business.

Builders started work on an estimated 98,000 new dwelling units last month. That not only was about 4,000 above a year earlier, but it was the first month since January, 1951, to top the year-ago level.

This year's 98,000 for March has been beaten only once—in that record year of 1950, whose March starts totaled 117,300.

Textiles may or may not be dragging bottom now, but one thing is certain: They had not come to the turning point in March.

Mills last month consumed less cotton than even in the short month of February. On an average per working day, consumption was 36,827 bales, against 39,089 in February and 45,152 a year ago.

Similarly, shipments of all types of rayon and acetate were cut again. The March figure, at 75.7-million lb., was 7% below February.

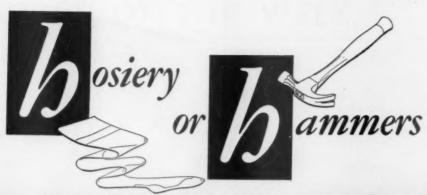
And even at the reduced rates, output topped rayon-acetate shipments; factory stocks climbed by 4.7-million lb. to a total of 119.7-million.

American cotton must be piling up in foreign hands, judging by the tales now going around of the textile slump abroad.

Exports in the first seven months of the cotton season totaled 4,137,377 bales, compared with 2,578,021 for the like period a year earlier, the Census Bureau reports. This should assure a 6-million-bale year.

You've heard a lot about how hard federal income taxes hit last month. So here's another thought on taxes:

If you earn your income outside New York, you probably didn't think about it, but Tuesday's stock market break came on the Empire State's income tax day—Apr. 15. Just a coincidence?





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### FIGURES OF THE WEEK

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	§ Latest Week	Preceding Week	Month Age	Year Age	1946 Average
Business Week Index (above)	*231.3	†237.8	237.3	232.4	173.1
PRODUCTION					
	2.015	1.294	2,127	2,057	1,281
Steel ingot production (thousands of tons)					62,880
Production of automobiles and trucks	124,740	1125,668	120,392	162,839	
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	\$45,037	\$45,690	\$40,734	\$49,318	\$17,083
Electric power output (millions kin-watt-hours)	*7,150	17,219	7,414	6,747	4,238
Crude oil and condensate production (daily av., thousands of bbls.)	6,366	6,377	6,404	6,120	4,751
Bituminous coal production (daily average, thousands of tons)	1,537	11,644	1,653	1,755	1,745
TRADE					
Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars)	77	76	74	79	82
Carloadings: all other (daily av., thousands of cars)	41	44	45	44	53
Department store sales (change from same week of preceding year)	+18%	+13%	-16%	-9%	+30%
Business failures (Dun and Bradstreet, number)	184	185	156	172	217
and the second s	201	100	2,0		
PRICES					
Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)	433.3	434.6	437.7	516.3	311.9
Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100)	282.1	283.3	289.6	363.3	198:8
Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100)	338.1	335.4	338.6	407.4	274.7
Finished steel composite (Iron Age, lb.)	4.131¢	4.131¢	4.131¢	4.131¢	2.686€
Scrap steel composite (Iron Age, ton)	\$42.00	\$42.00	\$42.00	\$43.00	\$20.27
Copper (electrolytic, Connecticut Valley: lb.)	24.500e	24.500€	24.500e	24.500e	14.045e
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	\$2.50	\$2.50	\$2.50	\$2.43	\$1.97
Cotton, daily price (middling, ten designated markets, lb.)	N.A	141.72e	40.95e	45.14e	30.56e
Wool tops (Boston, Ib.)	\$1.85	\$1.85	\$1.90	N.A.	\$1.51
FINANCE					
90 stocks, price index (Standard & Poor's)	189.7	190.3	189.2	175.2	135.7
Medium grade corporate bond yield (Baa issues, Moody's)	3.49%	3.49%	3.51%	3.33%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	21%	21%	21%	2-21%	1-1%
rime commercial paper, 4-to-0 months, N. 1. City (prevailing rate)	4870	4870	4870	2-2470	4-170
BANKING (Millions of dollars)					
Demand deposits adjusted, reporting member banks	51,176	51,162	53,406	49,205	††45,210
Total loans and investments, reporting member banks	72,917	73,111	73,641	69,707	++71,147
Commercial and agricultural loans, reporting member banks	21,049	21,172	21,233	19,273	++9,221
U. S. gov't and guaranteed obligations held, reporting member banks	31,006	31,163	31,854	30,713	††49,200
Total federal reserve credit outstanding	23,393	23,409	23,778	23,895	23,883
MONTHLY FIGURES OF THE WEEK		Lotest	Preceding	Year	1946
		Month	Menth	Ago	Average
Exports (in millions)February		\$1,328	\$1,247	\$1,076	\$811
Imports (in millions)		\$892	\$922	\$910	\$412
Wholesale prices (U. S. BLS, 1926 = 100)		112.3	112.5	116.5	78.7
Housing starts (in thousands)		98.0	77.0	93.8	55.9
Bank debits (in millions)		\$139,974	\$127,959	\$144,015	\$87,502
Bealiminary week ended Abril 12. N.A. Not available			Revised		

o Preliminary, week ended April 12. ++Estimate (BW-Jul.12'47,p16).

N.A. Not available.

<sup>†</sup> Revised.

§ Date for "Latest Week" on each series on request



### "POP'S HURT-AGAIN!"

With his 30 years experience, Pop Green was easily the best machinist in the shop. But he was always getting injured . . . and spoiling the plant safety record. "Too old," thought the Superintendent, "He'll get a pretty good pension . . ."

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... that Pop's accidents had a simple explanation. He had to climb three flights of stairs twice a day to reach his job station. The strain left him exhausted, nervous and "accident prone" on a job where the normal work was easily within his physical ability. By a simple change of job location the Company retained his valuable skill and from that moment his accidents stopped happening.

Specialists in geriatrics — the study of old age — have found that older employees retain their production ability much longer than was once supposed. Furthermore they are usually steadier workers, with fewer "Monday morning" problems than younger men. Their dissdvantages, like Pop's stair climbing — or the occasional need for heavy lifting — can often be removed by job rearrangement.

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Industrial preventive medicine — including studies in geriatrics — is only one phase of Liberty Mutual's comprehensive program. Called Humanies, it brings together all activities for preventing accidents and reducing their human and financial cost. Humanies guards machines and puts "invisible guards" around men. It provides medical care for injured workers and rehabilitation for the badly injured.

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### WASHINGTON OUTLOOK

WASHINGTON BUREAU APR. 19, 1952



A tax cut next year is a good gamble. You can't bank on it yet, but you are beginning to get some signs that relief may be ahead.

Politics favor it. The House and a third of the Senate come up for reelection this year. Taxpayers are doing plenty of complaining on the high rates. So the candidates are making promises of cutbacks.

Then there's the worry of a business slide. There are soft spots now, and many economists foresee a sizable "readjustment" next year as defense becomes less of a buttress to business.

A tax reduction might serve as a stimulant. For the individual, it's the same as a pay raise—more money to spend. For the corporation, it's capital—more money for plant and equipment.

A tax cut will mean deficits. This will worry the new Administration, but not nearly so much as the prospect that it might face the 1954 Congressional elections with a sizable recession on its hands.

Tax collections aren't up to forecasts now. March is the big month for the Treasury, and it fell below expectations.

Corporation taxes lag the most. In March the Treasury collected nearly \$2-billion less than it had figured on. The reason is that the experts underestimated the effect of rising costs on profits.

A bigger deficit isn't certain, though. Spending isn't up to the budget estimates, either. The result may be that the spending and tax lags will cancel each other out.

The floods improve prospects that Truman will transfer civil works (mostly flood control) from the Army Engineers to the Interior Dept. But it will be a close fight. The Engineers have a powerful lobby.

Truman may force the St. Lawrence Seaway issue. Unless Congress legislates U.S. cooperation with Canada on the project, Truman will help persuade the Federal Power Commission to license a New York State agency to team up with Canada. That way, New York would build the dam and powerplant essential to the project, and Canada would go ahead with the navigation end of it.

The Defense Production Administration is cool to another round of aluminum expansion. It figures that facilities now on the way will meet all needs.

But it may get pushed into a plan for more metal. Pressure on DPA is coming from antitrusters in Congress who take the position that independent fabricators should not be left dependent on Alcoa, Reynolds, and Kaiser. The idea is to bring a new producer into the field or make a deal for aluminum from Canada. A decision is expected within a month.

No real shortage of television sets is in sight. A big new demand will result from the Federal Communications Commission's decision to permit more stations to be built (page 27). But it will be next year before they get on the air in any numbers and open up new markets for TV sets.

The Army has licked the bugs in its new M47 medium tank. Faulty

### WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU APR. 19, 1952 turret controls had delayed acceptance of this new weapon, which the Army says will outmaneuver all known tanks in the field today.

But it may be too late for service in Korea. There's high optimism that a settlement is near. It could be another false alarm, of course. But Washington thinks not. It figures that Stalin wants an end to the shooting as part of his "peace offensive" in Western Europe.

Watch for Manly Fleischmann to step into Wilson's job as top mobilizer. The White House has offered it to him and now is trying to persuade a first-rate production man to come and serve with him. That would leave Fleischmann pretty much free to concentrate on untangling the mess that the steel wage offer has made of the stabilization program.

Congress will let Truman get by with the steel seizure (page 30). Most members call it an illegal action. But there's little push to do anything—other than rewrite the economic controls. That misses the basic issue and leaves any reversal of Truman up to the courts.

It's a bad precedent to leave standing. It can serve as "justification" for even more drastic action some future President may want to take.

The aftermath of the steel dispute will be costly. The stage has been set for a sixth round of wage boosts. Controls can delay the full impact on prices, temporarily. But sooner or later, such a big rise in wages will work itself into the price system. And there may be damages to be paid to the steel industry. Other seizures have led to damage payments out of the Treasury, with your tax dollars.

Kefauver is now No. 1 on the Democratic side and has the big city bosses scrambling for a candidate to stop him.

Pressure is on Stevenson to make a try, despite his statement that he only wants to run for the Illinois governorship this year.

Eisenhower looks stronger all the time. His sweep in New Jersey hurt Taft, even though Taft left the campaign there to his local supporters.

Congress is wavering on defense now that foreign tensions seem to have eased a little.

Note the spending ceiling voted by the House as an economy step. It would limit Army, Navy, and Air Force spending in fiscal 1953, starting July 1, to \$46-billion—a monthly average of about \$4-billion.

If that sticks, it would force a rescheduling of production. The spending rate is close to the proposed ceiling right now, and the plan has been to push it to around \$5-billion monthly by yearend.

A compromise will be worked out in the Senate. Chances are that the ceiling will be raised, maybe even eliminated.

But the House vote will create business uncertainty. It shows how Congress can blow hot and cold on rearmament as war threats come and go. It shakes the confidence of businessmen keying their future plans to the rearmament effort.

### 40 YEARS OF AUTOMATIC FLIGHT...BY SPERRY



1912 The first Sperry automatic pilot was flight tested in a Curtiss hydroaeroplane in 1912 at Hammondsport, New York. This was the world's first gyroscopic automatic pilot to fly an aeroplane.



1914 Lawrence Sperry, in a public demonstration of automatic flight in Paris, 1914, won the International Safety Competition with his "stable" aeroplane.



1916 Ancestor of the guided missile was the aerial torpedo developed during 1916-18 by Sperry working with the U.S. Navy. These automatically controlled "flying bombs" were tested over Great South Bay, Long Island.



1933 Automatic flight again won public acclaim in 1933 when Wiley Post made the first solo flight around the world with the Sperry automatic pilot as his "co-pilot" in the WINNIE MAE.



1937 First completely automatic landings were made by the U.S. Army Air Corps in 1937 by coupling radio aids to the Sperry automatic pilot.



1943 The first electronic automatic pilots flew thousands of B-24s in World War II and advanced the art of precision bombing by providing an improved stable platform.



1947 The first "pushbutton" aircraft, U.S. Air Force's All-Weather Flying Division's C-54, equipped with Sperry automatic pilot and automatic approach control, crossed the Atlantic both ways in 1947 without human hands touching the controls—including take-offs and landings.



1952 The modern Gyropilot\* flight control is the outgrowth of Sperry's 40 years of research, development and manufacture of automatic controls for aircraft. This versatile, all-weather pilot represents a high-performance technique for automatic control which is readily adaptable to all types of aircraft—airliners, executive craft, jets, helicopters, lighter-than-air ships and guided missiles. This technique pioneered by Sperry has led to a new fundamental concept of flight for the aircraft of tomorrow. Sperry Gyroscope Company Division of The Sperry Corporation, Great Neck, New York.

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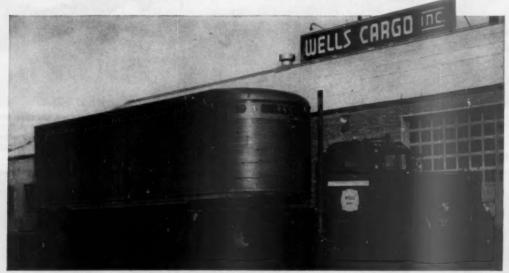
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TEXACO



### Second Round for TV Boom

- End of the freeze on new stations paves the way for tremendous expansion.
- Biggest factor is opening of ultra-high-frequency band, which will bring TV to half the country now without it.
- But TV's second boom won't come overnight—or even this year.
- Principal delay will stem from FCC hearings and court battles over station permits.

When the Federal Communications Commission thawed out its 3½-year freeze on new TV stations last week, nobody warmed up faster than the makers of TV sets and transmitters. From behind their inventory piles, stacking up in a two-year sales slump, producers glued their eyes on big new markets, which were looming on the horizon.

True, the manufacturers are aware that it will take many months for FCC to parcel out the 2,053 new stations it has allocated to 1,291 communities—and more months for the stations to get on the air. But like prospective broadcasters and TV-hungry communities across the land, they are ready, sleeves rolled up, for the second big scramble in the nation's newest billion-dollar industry.

### I. Blueprint for Expansion

FCC's official plan for the nation's new TV system, which opened the floodgates, packs no big surprises for anyone: There are few major changes from preliminary plans announced earlier (BW-Mar.22'52,p22). But it answers two important questions that would-be broadcasters and manufacturers have been asking themselves in two years of plans-making:

 How will FCC process applications for station permits—on a city-bycity or on a channel-by-channel basis and who comes first?

 Which areas get new channels in the 12 already established very-highfrequency (VHF) band now used by the 108 existing stations and which ones will share the 70 ultra-high-free quency (UHF) channels not yet in

· How and When-Rather than hold one big hearing for all channels in a city, then divide them up among the best qualified applicants, FCC decided to go channel by channel. That means that, if an applicant doesn't get a permit for the particular channel he applies for, he won't be considered for any other channel in that city. Since this is the case, a smart applicant will keep a close check on competition for particular channels between now and July 1 before deciding which one to take his chances on. In effect, potential applicants in each city will at least partly parcel out the channels among themselves before they ever go to FCC.

When FCC starts processing applications after the July 1 filing deadline, these will stand at the head of the line:

 Noncommercial stations (242 channels are reserved for educational purposes) and all channels in U. S. territories and possessions.

(2) Channels in non-TV cities, such at Denver and Portland, Ore., and cities that get only UHF channels, by city size.

(3) Cities in which all VHF channels are assigned and only UHF channels are available.

 Two-Band System—Most of the new stations will be in the 70-channel UHF band, which FCC opened up to augment the overcrowded VHF band.

In fact, under the new allocations plan, 925 communities will receive only UHF broadcasts; 89 will get only VHF; and 250, including the largest cities and the 63 cities that now have TV, will get channels in both bands.

The 16-million sets in use now, however, receive only VHF. For this reason, most applicants naturally will seek spots on the VHF band.

But manufacturers have long been preparing for the opening of the UHF band, and set owners in communities that receive only UHF broadcasts, or both VHF and UHF, can easily have their sets converted by buying an external adapter. These adapters are about the size of a portable radio, and a serviceman can plug one into the set in an hour. They'll cost around \$50.

Most recent TV models have builtin facilities for conversion to UHF. The most common type uses internal tuning strips, flat wedge-like pieces that fit into the tuning device. By buying and inserting the appropriate strips, these sets can be converted to receive one or more UHF channels at little cost.

### II. How Soon?

Obviously, FCC's blueprint opens up a vast new secondary market for sets in cities that are getting TV for the first time and for transmitters and converters in areas that will get the new UHF channels.

This expansion, however, will be nothing like the first industry boom of five years ago. The biggest difference is that the new market will be much slower to develop. It will take years to get the more than 2,000 stations on the air, and it's very unlikely that a single one will be operating before 1953. In fact it will be a good long while before FCC even starts handing out permits.

• Bottleneck—The biggest delaving factor will be cases involving more than one applicant for certain stations (FCC estimates 90% of the applicants will fall in this category). Deciding these cases will call for lengthy FCC hearings and probably countless legal battles.

Even when a station finally gets a permit, it will take months more to get it built. Just how long depends on availability of materials, especially for steel towers.

### III. How Big?

For these reasons, industry is cagey about predicting just how big a market will develop, and when. Nobody

really knows for sure. Estimates for the next few years range all over the lot. Most realistic predictions, though, fig-ure the lay of the land this way.

· Receivers. Estimates boil down to probably 4-million to 5-million sets in 1953-an increase of about 50% in present demand. Some industry officials predict that by 1956 the country will have 37-million to 40-million TV sets in use, compared with today's 16-

· Transmitters. Manufacturers figure that around 280 permits for new stations and 50 for power increases should be allocated by the end of 1953. It's a pretty good guess that about 164 of these new stations and 30 power increases should be on the air by the end of 1953, leaving the rest still building

at that time.

One thing that could throw these estimates off considerably would be lifting of the ban the government slapped on color TV shortly after Korea, to conserve materials for defense. Most producers, however, feel that prospect is very unlikely. Even if color should get the green light, they say, it would take close to a year to get going on it, and in any event black and white will get the push as long as inventories are high.

### IV. Ready or Not?

Will manufacturers be ready for the new demand when it does come? The industry's answer is a loud, unqualified

· VHF-There is no question but that producers will be able to keep up with any demand for VHF receivers and equipment. The industry has sold 28 VHF transmitters to prospective broadcasters, has another 20 in stock and materials on hand for another 149. Some would-be broadcasters, too, have the equipment they need stored in warehouses, pending the outcome on their applications.

· UHF-Manufacturers are certain they will be able to keep pace with the much bigger demand for UHF transmitters, too, although they can't produce them nearly so fast as VHF because of the 9-to-12-month production

cycle involved.

Right now no UHF transmitters are ready, but the industry has materials

for five units.

· Enough-Producers are pretty much agreed that present facilities are enough to handle the new demand and that the increase will merely take up the slack in many cases. Only a few are planning to add plant facilities. CBS-Columbia, for instance, is building a new plant in Long Island City to up its output of sets from 1,000 to 2,800 a day. Philco, too, has a new plant about 75% completed to handle all its electronics products-but the company hints that anticipation of the new TV outlets figured largely in its planning.

Some major companies, such as Westinghouse, have plants turning out electronics equipment for defense that they will convert to set manufacture when the defense demand slacks off. Westinghouse's new plant at Metuchen, N. J., for example, was originally planned to triple its set production, now works for defense.

### V. The Push

While most companies may not have to expand their producing facilities, sales and distribution staffs nat-urally have to be enlarged to cover the new market areas. Many have been doing this for the past two years. CBS-Columbia says it's easy: Dealers are coming to them asking for franchises in new areas. Most large companies, such as GE, Westinghouse, Zenith, already have nationwide dealer and distributor organizations for radio sales.

· Wait and See-Most companies have big promotion plans up their sleeves that they are keeping pretty much under cover until the time comes.

DuMont, which is putting its big push into UHF, has salesmen already roving the country making their pitch for UHF. CBS-Columbia, on the other hand, anticipates no particular selling push for UHF. CBS feels that such an emphasis on UHF would dissipate their selling efforts unnecessarily, that people are already TV-conscious and will be anxious to try something new.

· More of the Same-Westinghouse officials admit that their advertising ex-

penditures for the next few years will be the biggest ever. They won't reveal details of their plans, but say they are blueprinting a specific packet for each new market along the lines followed from 1945 to 1948, when TV first went on the air. These packets include a preliminary campaign, tie-in program when the new station opens, and intensive followup.

In fact, most manufacturers will probably follow the same plans they used when TV first went on the air. Best indication of the sort of thing that will go on is the technique RCA Victor used back in 1950, just before Norfolk's first TV station opened. RCA, in co-operation with Norfolk newspapers, sponsored a promotion splurge including a four-day exhibit of sets of all makes in the city arena, complete with local talent shows and TV-set give-aways, and a kick-off luncheon for

dealers and distributors.

· Cooperative-DuMont is using a slightly different approach, plans to work with local stations, distributors, dealers, and chambers of commerce to help sell UHF and build an audience by the time the stations open. DuMont's promotion is part of a three-part package that it figures will equip a new station owner with everything from broadcasting equipment to a built-in audience in one fell swoop. Under this plan, a broadcaster could begin operations with a minimum amount of equipment, later add further equipment out of earnings.

In addition, DuMont will provide program service to local affiliates, including nationally sponsored shows with

ready-made audiences.



### Trucks Ride High and Dry

When flood waters threaten your community, it takes ingenuity to keep your head-and property-above water. Sioux City resident tied the front ends of his trucks to heavy trees, then hoisted the engines clear of the water when the Missouri River raged into the city, in what is

turning into one of the nation's worst floods. At midweek the rampaging Missouri-Mississippi River system had put more than 1-million acres of land under water, inundating at least 34 municipalities in Minnesota, Wisconsin, North and South Dakota, and other midwestern states.



LABOR'S Phil Murray and industry's John Stephens are in background, as government—Robert Lovett, John Steelman, and Nathan Feinsinger (seated, left to right)—moves into foreground of steel situation. Steelman called off talks, and . . .

### Steel Will Stay Seized

Sawyer prepares wage package for workers, but Arnall stands firm on prices. That means the industry will bring an avalanche of damage suits against the government.

The government this week began preparing to live for a long time with its seizure of the steel industry.

When acting defense mobilizer John Steelman at midweek called an end to the fruitless talks he'd been having with Phil Murray and the steel managements, it marked the end of any hope for an early unsnarling of the union-industry-government tangle.

How Long?—From here on out, President Truman's historic seizure of the steel mills will run a long and complicated course. No one in Washington, or anywhere else, for that matter, can foresee all the legal, political, and business consequences that will stem directly from the seizure.

Secretary of Commerce Sawyer immediately prepared to give Murray and the steelworkers a wage package—and whatever its dimensions, Murray will keep on working for the government. If and when the industry is turned back to private owners, though, Murray stands ready to strike to get whatever is needed to provide the full Wage Stabilization Board package. But any

return of the mills now seems months away. In fact, government seizure of steel may stretch out interminably, as it has with the railroads.

Capehart Boost—Price stabilizer Arnall is sitting tight on prices: The industry must still come in and show what it is entitled to under the Capehart Amendment. Sawyer, when he applies for a Capehart increase as the steel industry's manager, is getting no special price deal to offset the wage increase he gives the steelworkers.

This inevitably sets the stage for an avalanche of steel company damage suits against the government. They are bound to be up and down the federal courts for years. The longer the seizure, the more complicated the suits become, and the larger the damages sought.

Sawyer began setting up an organization of his own, staffed from Commerce and other government agencies, to keep in touch with all the problems of having technical control of the mills. This includes at the outset a comptroller, a production division, a compliance division, a legal expert, and a liain

son man. Sawyer aides insist there's no thought of getting into the actual operation of the mills. But with the legal battle looming over damages, Sawyer obviously is well advised to spare no expense to be well prepared.

• Simmering—Congressmen and senators were talking about Truman's action, but there is little likelihood of any quick remedial legislation. After the first day or two of boiling over against Truman, the seizure issue quickly dropped down to a slow simmer as Congress took its Easter vacation. Right now the best guessing seemed to be that concrete reaction would most likely

show up in the extension of the controls law, the Defense Production Act. Seizure won't be settled, but the controls may be loosened some more.

### Railroads Get Rest of Freight Boost From ICC

The nation's annual freight bill jumped anywhere from \$675-million to more than \$700-million this week, when the Interstate Commerce Commission rounded out the 15% rate boost asked by the without a year area.

by the railroads a year ago.

Last August ICC had granted eastern roads a 9% boost, western and southern roads a 6% increase. This week the numbers were reversed. Last summer's surcharge is effective till next February; the new increase runs out in February, 1954. The new rates are effective on 15 days' notice, except for rates on grain and grain products, which require 30 days' notice.

Besides the railroads, freight forwarders and waterway carriers get the new higher rates. They, too, were parties to the freight rate hearings.

 Special Rates—The commission listed several commodities as exceptions to the general increase. These include fresh fruits and vegetables and a variety of bulk items;

Iron ore-Increased 12% in basic hauling rates, 15% in handling charges at lake ports.

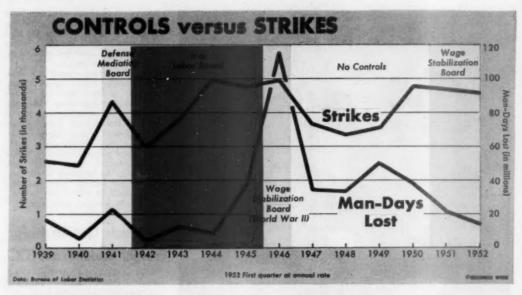
Grain and grain products—Increased

Coal-Lignite increased 6%, but not above an increase of 20¢ a ton; other coals and coke increased 12%, subject to a maximum raise of 40¢ a ton.

Phosphate rock—Maximum increase of 60 ≠ a ton, applying also to phosphate clay and salt; potash is subject to maximum increase of \$1 a ton.

Fresh fruits, vegetables—Maximum increase of 12¢ per cwt. This increase also applies to canned or preserved goods, nuts, copper, lead, zinc, lumber, and articles taking a lumber rate.

Millwork-Maximum increase of 14¢ per cwt. for building woodwork and millwork.



### AFTER STEEL SEIZURE . . .

### Controls Still Dominate Labor Relations

It was evident this week that the country was going to take the steel industry seizure in its stride. The undefined but real hope of some sections of business that people would somehow rise up to repudiate Truman's extreme action and his demagogic attack on in-

dustry proved illusory.

After a day of headlines and another day of sharp editorializing, the press relegated the steel case to the back pages. The mills were operating again at capacity levels. Litigation over the President's right to seize slowed down to the customary snail's pace imposed by the courts. Congress resumed its normal tedium of debate and committee hearings. And the Wage Stabilization Board, which its critics had expected would be destroyed by the blast, kept on doing business at its old stand. · Stronger Steelworkers-But things are not quite the same as they were before the dramatic events of last week.

One immediate result has been to strengthen CIO's steelworkers' union. Just before Easter, some 600,000 men were resigned to going out on a strike of uncertain duration just before Easter. Face to face with the prospect of payless paydays—sullen and anxious and with no clear focus for their resentment—they considered themselves miraculously delivered from a hapless plight by the President's action. When they were told by the official spokesmen for their employers that the President had

acted in order to pay off a debt to their union chief, they found it difficult to share their employers' indignation.

Newspaper reporters and interviewers who sought workers' opinions in the steel towns reported them proud of Philip Murray and very grateful to President Truman for pulling them out of a hole.

 Clearer Powers—Another result has been to make it practically sure that the seizure powers of the President are going to be ruled on by the courts.

The steel industry, led by Republic and Youngstown, is determined to push through to a final judicial decision the question of the President's right to seize their properties. If it is held, in the end, that Truman is without such authority, the occasionally used, and frequently brandished, big weapon for settling strikes will have to be discarded. Something even more distasteful than seizure might replace it.

If the seizure power survives steel's challenge, it can still be modified and

hedged by Congress.

But it does not now look as though Congress will see that job through. The kind of rules being discussed on Capitol Hill by legislators who think the seizure weapon should cut two ways are not elaborate. Among the suggestions made: (1) Make it mandatory that the government seize the union as well as the company when seizure is used to avert or end a strike; (2) make seizure

possible only after Congress votes that an emergency has been created by a labor dispute; (3) provide for immediate arbitration of disputed issues in a case where the government has seized, the government to put into effect the terms of the arbitration award if private management finds it unacceptable: (4) make it mandatory to invoke the Taft-Hartley act simultaneously with seizure and permit the government to hold the seized property only until the injunction machinery of T-H can be invoked.

• Congress Uninterested—Some of these proposals are of doubtful Constitutionality or dubious practicality. All of them have a dim political future. Congress already has forgotten the excitement of last week. It will take another shock to change the outlook which is now for no action.

Nor does Washington expect that the steel case will turn Congress against renewing wage-price control authority; as part of the Defense Production Act, this expires in June. The one thing that may be changed in the law-and this is no better than an even money bet—is amending out of it the dispute-settling power of WSB. This would leave WSB a wage policy making and administering agency, but deprive it of the right to recommend terms in cases where the parties disagreed.

Procrustean WSB—In the meantime,
 WSB—and the nation's labor relations—can be expected to continue in pretty

much the same rocky way. The coolness of employers toward the board, intensified now, is matched by organized labor's increased friendliness. In the months ahead WSB will be primarily occupied with playing the role of a modern Procrustes.

Procrustes, the legendary highwayman of Attica, was deeply attached to an iron bed he owned. So proud was he of his bed that he insisted that all who came to his house stay as overnight guests and sleep in his bed.

Procrustes did. however, have one peculiarity as a host. He felt it necessary that everyone who lay in his bed fit it exactly. Graciously, but with a determination not to be denied, he stretched the bodies of those who were too short and hacked off the excess of those who were too tall to fit the bed perfectly. Unless you were built just right, an evening with Procrustes was something you wouldn't forget soon.

For the Procrustean WSB, the iron bed is the steel wage formula.

### Congress Bites the Budget

House makes some deep dents-\$6-billion worth. The Senate, in this election year, seems inclined to go along.

Congress seems intent on being really tough about cutting expenditures and turning in a record of economy.

At mid-April the House of Representatives, where the money bills originate, had slashed and pared \$6-billion off President Truman's \$85-billion budget requests for 1953. With only two significant appropriations left to go, the House had thus reduced the budget request by 12.4%.

Normally, Washington doesn't take House economy cuts too seriously. The Senate almost always restores most if not all the cuts. Indeed, many times in recent years Congress has ended up appropriating more money than the Administration requested.

· Going One Better-But this is an election year, and military rearmament is not so popular as it was just after Korea. So the Senate is acting as if it will be economy-minded, too. In the only money bill it has voted this session, it cut the House bill by several million dollars.

· Scoreboard-Here's the story on appropriations so far-with only the Agriculture Dept. and the multibillion-dollar foreign aid bill left to be hacked

The House cut military funds from \$50.9-billion to \$46.2-billion-around 8%. It would take an international flareup to induce the Senate to put back much of the cut. Congress feels less and less urgency in military ex-

penditures.

To make sure that its cut sticks, the House put a \$46-billion ceiling on military expenditures for fiscal 1953. This means that instead of pushing up their monthly rate of spending to \$5-billion a month, the military will have to level off at a little under \$4-billion a month. There is a move in the House among Republicans and Southern Democrats to attach the same type ceiling provisions to all future money bills.

Next-biggest targets of Congressional economy are the so-called pork-barrel

projects and nonmilitary construction requests. Biggest reduction by the House was a 28% cut in money for Army civil functions-flood control and rivers and harbors projects. The Interior Dept. was next with a 22% slash in funds, mostly for construction projects. · Getting Off Easy-Departments whose operations are chiefly administrative suffered less. Post Office and Treasury got through with only a 2% reduction. Over-all cuts for operating agencies will average about 5%, which means most of the cuts will come out of personnel funds.

Although neither House has yet acted on requests of \$7.9-billion for foreign aid, indications are that this amount will be reduced by at least \$1-billion.



### Rockets Red Glare

Two rocket motors, designed for guided missiles, are fired at Bell Aircraft Corp.'s test plant. Bell is working on guided missile airframes and rocket powerplants for the Air Force and the Navy.

### Merger's Hopes...

. . . look brighter as Truman tries to lump public works of Army Engineers under Interior Dept.

A battle of lobbies has been joined in Congress. The stakes are the billions of dollars that are spent for federal construction of dams and power-

Focus of the struggle is a reorganization plan, backed by President Tru-man, which merges the public works (civil functions) of the Army Corps of Engineers with the Bureau of Reclamation and lumps them under the

Interior Dept.

This merger was the most controversial of the proposals made by ex-President Hoover's government reorganization commission. Already, it has stirred up the anger of the powerful Rivers and Harbors Committee and the private lobby of the Engineerswhich includes civic and business groups in practically every area of the

· Utilities-Active in the opposition to the merger is Sen. John McClellan, chairman of the committee that will handle the reorganization in the Senate. Also active in the cause are the private utilities. Their reason is simple: Engineers don't market electricity: Interior's Bureau of Reclamation does.

In the past, these various interests have been able to defeat many moves to clip the autonomy of the Army En-

This time, though, the foes of the merger are far from sure that they will be able to block it again.

• Disfavor-In the first place, the Engineers haven't been looking very well to the public eye. Charges of extravagance and waste in construction of military bases overseas have left their mark. And a second flood within two years in the Missouri Valley, over which the Engineers and Reclamation rule with divided authority, has raised demands for something more efficient.

Another factor improves the merger's chances. Neither House nor Senate can pigeonhole the proposal. To block it, one or the other will have to take positive action against it within 60 days. Getting a majority to come out in the open against the merger may be hard in an election year. Its proponents are backing it on grounds of economy and efficiency, both highly popular with voters. Congressmen from city districts that don't benefit from the millions appropriated for flood control can go along



In British film, textile chemist discovers process to make "miracle fiber."



Test weave of the fiber astounds mill owner. It won't wear out or get dirty.



Fearing lost business, industry leaders try to keep news of fiber from public.



Fearing lost jobs, labor joins management in effort to kill the invention.

### **Blended Synthetics Offer** Any Cloth You Want

The tantalizing thing about J. Arthur Rank's latest production, a satirical comedy called The Man in the White Suit, is that the situation is absurdbut altogether plausible. The pictures above tell the plot: A persistent inventor (Alec Guinness) discovers a "miracle fiber" that wears forever and won't get dirty. Textile management and labor first hail his discovery, then vie with each other to squelch it when they realize the threat it holds to their special interests. Finally, to the embarrassment of all, the fiber turns out to be unstable; it pulls off in handfuls from the inventor's back.

· No Joke-Some real-life chemists and textile men may not see the joke; it's too much like what they've been going

through for the last 15 or 20 years with the development of synthetic fibers. As new fibers were announced -first rayon, then, with increasing ac-celeration, nylon, Orlon, and a bewildering string of other 'lons-chemists were lionized, wool and cotton growers panicked, and the public cheered.

Now all are beginning to realize that synthetics are neither so good nor so bad as they first appeared. None is a "miracle fiber"; each has distinct limitations. Nylon will wear like iron and hold a crease like iron, too-but it has an unpleasant, greasy feel next to the skin. Orlon has a pleasant, "silky" hand, it bulks like wool and weathers well-but it burns. Dacron won't burn

Drape Wrinkle Bulk Resilience Moisture absorption Abrasion Color Wel Wearability resistance Moth resistance Mildew resistance Strength Chemical 4 eather resi Freedam Electrical Dollars per of stople -but if you drop a hot cigarette ash

on it, you'll have a hole in your suit.

It's still a fact that-apart from their uncertain supply-the best all-round fibers are the ones that have been around longest-wool and cotton. A textile research engineer puts it this way: "If the only fibers we knew up to now were the synthetics and somebody suddenly 'discovered' cotton and wool, cotton and wool would be hailed as 'miracle fibers.'

· Growing Share-Yet, as a percentage of U.S. total fiber consumption, cotton has been declining steadily (from 89% in 1920 to 68% in 1950); wool has just barely held its own (wobbling between 8% and 10%); while the synthetics have rocketed up (from 0.3% in

Wool	Silk	Cotton	Rayon	Acetate	Nylon	Orlon	Dacron	Dynel	Vicara	Fiberglas
Good	Good	Good	Good	Fair	Fair	Poor	Fair	Fair	Good	医胃
Good	Good	Fair	Fair	Good	Poor	2	Good	9		
Good	Fair	Poor	Poor	Fair	Fair	Fair	Good	?		
Fair	Fair	Fair	Poor	Fair	Good	Good	Good	7		1
Fair	Good	Fair	Poor	Poor	Good	Good	Good	Good	?	
Good	Poor	Fair	Fair	Fair	Fair	Good	Fair	Good	Good	
Good	Good	Poor	Poor	Fair	Good	Fair	Good	Fair	Poor	
Good	Geod	Good	Good	Fair	Poor	Poor	Poor	Poor	Good	
Fair	Feir	Fair	Poor	Poor	Good	Fair	Good	Foir	Peor	
Good	Good	Good	Good	Fair	Fair	Fair	Fair	Fair	Good	
Poor	Fair	Good	Poor	Fair	Good	Good	Good	Good	Poor	V 2.5
Good	Fair	Poor	Poor	Poor	Fair	Poor	Fair	Good	7	
Poor	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Fair	Poor	Poor	Poor	Good	Good	Good	Good	Good	Good	
Poor	Good	Fair	Good	Poor	Good	Fair	Good	Fair		Good
Fair	Fair	Fair	Poor	Poor	Good	Fair	Good	Fair	rate (Har	Poor
Poor	Fair	Good	Good	Fair	Poor	Fair	Good	Fair		Good
Poor	Poor	Poor	Poor	Fair	Fair	Good	Fair	Foir		Good
Fair	Good	Good	Good	Fair	Poor	Poor	Poor \	Puor		Fair
Poor	Poor	Poor	Poor	Fair	Good	Good	Good	Good		Good
\$1.87	\$4.73	5.41	\$.40	\$.42	\$1.78	\$1.90	\$1.80	\$1.40	\$1.00	\$1.37 filament only

1920 to over 22% in 1950). Projecting synthetics' incline and cotton's decline, the two should meet to divide the total fiber market equally between them sometime around 1970. Wool's share of the market will certainly be no bigger, probably much smaller, than it is now.

• Blends Are Best-If no one of the new synthetic fibers is any better for all-around use than cotton or wool, then why are the synthetics wresting the market from the naturals? The main reason is blends; now that it has this wide array of fibers to choose from, the textile industry is learning how to mix the fibers together to produce one yarn or one fabric that has the good qualities of each and the bad qualities

of none. Thus Goodall-Sanford blends cotton with mohair (for luster and wrinkle resistance), with rayon (for colors and softness), and with nylon (for abrasion resistance), and comes up with its summer suiting fabric, Springweave. So does Bachmann-Uxbridge mix 15% nylon with 85% wool to more than double the wearing life of a 100% wool fabric.

 Stable Price—The factors of price and availability bear heavy in synthetics' favor, particularly from the mill man's point of view. Natural fibers are subject to natural aberrations—weather, blight, etc—that make prices unpredictable. Placed, as many are, 15,000 mi. from their main raw material source, woolen mills must buy as much as five to nine months ahead of production. With the whole world bidding for wool in the Australian market, much can happen to prices in five to seven months—as it did after the Korean outbreak, when wool at Sydney jumped from \$1.20 to \$3.90 and back down to \$1.60.

"The best thing about synthetics," says one mill operator, "is that they take the speculation out of inventory buying. They greatly reduce the amount of capital necessary to run this business, and, for the first time, they permit us to compete on the basis of manufacturing efficiency and sales promotion—not on how well we can read the crystal ball of the wool market."

• Universal System-Versatility is becoming an essential ingredient of textile manufacturing efficiency, and it's brought on by the advent of synthetic fibers. Time will come, say many textile experts, when there will no longer be such things as woolen mills and cotton mills; there will be textile mills instead—mills that can turn out a wide range of fabrics, from the weights of the finest silks to the heaviest woolens, and that will be able to shift their production from one fabric to another at a moment's notice.

Until recently, a mill could afford to invest huge sums in machinery to spin just cotton yarns, machinery that would handle fibers only 1½ in. long and no longer, and the mill across the river could specialize in woolens and worsted and equip itself to handle fibers

no shorter than 3 in.

Synthetics are bridging that gap. With the development of the science of blending, the producer of cotton-weight fabrics will find himself competing in the same market with the woolen manu-

facturer.

The trend in machine design is toward this "universal system," as it is called. Only a short time ago, Collins & Aikman Corp. announced development of a new spinning system that will handle any fiber, natural or synthetic, long or short staple (1 in. to

9 in. long).

· Fiber, Not Wool-This decompartmentalization process prompted by the development of synthetic fibers shows up all through the industry. Just a few months ago The American Wool & Cotton Reporter, a trade publication, changed its name to America's Textile Reporter. Cotton, another trade publication, has broadened its scope under the new title, Textile Industries. Lowell Textile Institute in Lowell, Mass., is planning a course in textile manufacturing-not cotton manufacturing or wool manufacturing. Massachusetts Institute of Technology's textile department teaches operations, not processes; the emphasis is on how to treat fibers. not how to make worsteds.

• Woolier Than Wool—In their effort to go the natural fibers one better, synthetics are forcing naturals to recognize their shortcomings and do something about them. Confronted with competition from fibers advertised as "woolier than wool," wool processors are investing heavily in research to make their natural fiber woolier than woolier than wool The process called Textralizing developed by Alexander Smith & Sons is an example. Textralizing puts extra crimp in the natural wool fiber, giving it a heavy bulking effect that's desirable in rugs and

On a broader scale is the internationally sponsored Wool Research Project, a four-year program to study the basic physical and chemical properties of wool and its mill processing characteristics. Textile Research Institute Laboratories of Princeton, N. J., is doing most of the probing. For centuries wool processors have aged wool, sometimes for as long as three weeks, between processing steps. They knew it helped, but they didn't know why. TDI has found out why—and incidentally has proved that aging can be shortened to days instead of weeks by steaming the wool.

• Digestion Period-Most textile chemists and researchers agree that the

period of frenzied development of new and better synthetic fibers is about over for a while. There are now some 25 of these fibers, most of them just getting out of pilot-plant production. The emphasis from now on will be on learning how to use the fibers we already have—rather than on discovering new ones.

And the consumer can expect to see, not radically new kinds of clothing, but clothing that is easier to care for. The era of the wear-ever, dirt-free suit is still

ahead.

### Just Power Areas Need Apply

Present and potential power supply will be the chief consideration when Atomic Energy Commission settles on a site for its proposed billion-dollar gaseous diffusion plant.

The Atomic Energy Commission is shopping around for a place to put its proposed billion-dollar gaseous diffusion plant-largest single plant in the \$4-billion to \$5-billion expansion program that AEC will put up to Congress soon (page 166).

Key factor in choosing a site is to find an area with sufficient present and potential supply of electric power. The new plant will require some 1.8-million kw. at its operating peak. Even that is less than half the total that will be needed for the over-all expansion.

 Still Open—AEC hasn't settled on a site as yet. Right now it is concentrating its surveys in the Ohio River Valley (page 174) mainly because it has the needed potential supply of electric power at reasonable rates and because there is plenty of water available.

In any event, because of the huge power requirements, AEC is only inter-

ested in areas that offer:

• Cheap fuel for the production of

electricity.

 Sufficient power supply right away for interim needs.

 Enough water supply both for electric generating and other plant needs.

Ability to absorb the new 1.8-million kw. into the regional power system in the event the AEC plant should be eventually closed down.

So far, the Ohio River Valley seems to be able to meet these demands more adequately than any other area that has

been considered.

• Power Needs—Extra transmission lines and interconnections with existing power systems would have to be built to supply interim power requirements, which would gradually reach a peak of 400,000 kw. This power would be used only for about 12 to 18 months, then would gradually be reduced as the permanent power source is completed.

Several months ago AEC invited a group of power systems in Ohio, Indiana, and western Pennsylvania to submit a joint proposal for supplying both the interim and the permanent power needs.

Some 10 or more private power companies have been working up such a proposal, but have not yet submitted it in final form. Details of the plan are

secret.

Nothing Firm—One or two tremendous generating plants would have to be built to supply the permanent requirements. Since Congress still hasn't authorized the program, no firm orders have been placed with manufacturers for the large equipment that will be needed, although requirements have been talked over with top Washington officials.

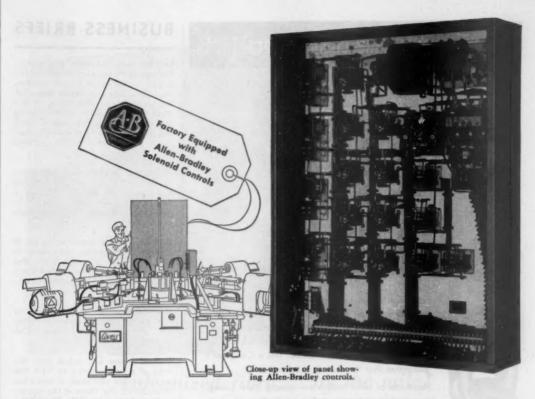
A large slice of the AEC entire proposed expansion will undoubtedly take place at existing plants or those now being built. Indications are that the Paducah (Ky.) AEC plant will have to carry part of the load. Four new generating units that the Tennessee Valley Authority proposes to add to its Shawnee plant would supply power for the Paducah expansion. As it is now, money for these units has been turned down by the House because the Paducah expansion has not been duly authorized by Congress. But the Senate may recommend restoring the funds.

There is also a possibility that Electric Energy, Inc.'s Joppa plant may have

to install more capacity.

But it has been made clear that if the Paducah expansion comes off the Shawnee and Joppa plants will not serve as alternate sources of power supply for the proposed new gaseous diffusion plant. The project will get a firm supply from plants that will be specifically designated for its use.

blankets



#### **Avey** Drilling Machine

operated by Allen-Bradley Controls

This precision drilling machine, made by the Avey Drilling Machine Company, Covington, Kentucky, is factory equipped with Allen-Bradley controls.

Dependability and precision in operation of the electrical controls are a major requirement for this type of machine. That is why Allen-Bradley solenoid switches, starters, and contactors are used. These units are equipped with double break, silver alloy contacts that require no maintenance. Their long, trouble free life makes them a decided sales asset to any motorized machine.

To help you with your motor control problems, call an Allen-Bradley engineer, today.

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis.







Bulletin 709 Solenoid Starter

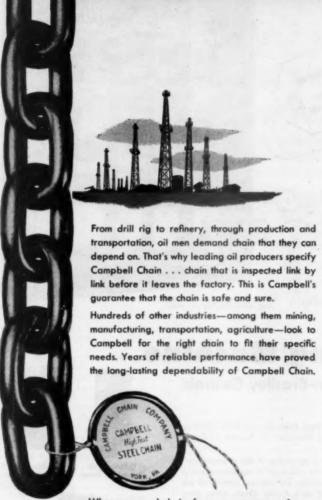


Bulletin 700 Universal 4 pole Relay



ALLEN-BRADLEY
SOLENOID MOTOR CONTROL

#### Oil men never take chain for granted!



When you need chain, for any purpose . . . in any grade, be sure to order it by the name—Campbell. Or, when you have an unusual problem involving chain, call the Campbell representative in your area. Take advantage of his experience.

Chain for every need . . . INDUSTRIAL FARM . . . MARINE . . . AUTOMOTIVE

CAMPBELL CHAIN Company

Makers of Famous CAMPBELL Lug-Roinforced TIRE CHAINS

#### **BUSINESS BRIEFS**

Gasoline from coal can be produced by hydrogenation processes to sell at 11¢ a gal., according to Ebasco Services, Inc., New York engineering firm. But the return to investors would be too small to attract private capital, Ebasco said. The National Petroleum Council had said a price of 41.4¢ would be necessary (BW-Nov.10'51,p70); Interior Dept. had estimated 11¢.

Passenger helicopter service got off to a bad start in Los Angeles. Less than two hours after dedication ceremonies, a Los Angeles Airways copter (BW-Nov. 24'51,pl 32) crashed. Five occupants were hurt.

DPA granted the largest certificate of necessity in the current mobilization to Erie Mining Co. of Aurora, Minn., this week. It authorizes fast writeoff of Erie's \$300-million taconite expansion (BW—Feb.23'52,p172).

**Rio Grande Southern** was allowed by ICC this week to abandon its entire 173-mi. narrow-gauge rail system in Colorado (BW-Feb.23'52,p134).

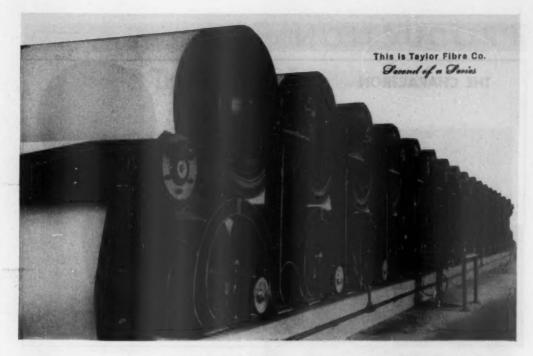
Packard Motor Co. lashed back this week at a Ford proposal to NPA that would increase allotments of scarce materials to the Big Three at the expense of the independents (BW—Dec. 29'51,p 27). Packard said the cut would put its plants out of business.

Chemical expansion slackened again this week. Diamond Alkali stopped work on its \$10-million two-year expansion program at its main plant at Painsville, Ohio. Reason: slackening demand from consumer goods makers for chlorine, caustic soda, soda ash, silicates. Last week (BW-Apr.1.2°52,p28) National Distillers called off a \$4-million sodium expansion.

Domestic airlines won CAB approval of a \$1-per-ticket service charge (BW— Mar.29'52.p28), but lost their plea to cancel the 5% round-trip discount.

Lincoln Electric Co.'s incentive system was upheld by the U.S. Tax Court after 10 years of litigation, started when BIR challenged the Cleveland company's 1941 payments under the plan. The court ruled the incentive plan had improved productivity.

The Detroit tank arsenal will shortly be turned over to a private contractor for operation. Army Ordnance is running it now, the change will be to cut costs. Potential contractors include Chrysler, Kaiser-Frazer. General Motors.



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The combination of workability, toughness, PLUS electrical insulating properties, makes Taylor Vulcanized Fibre ideal for such applications as extruded bushings, slot insulation, end laminae ... and countless others! Daily, from this huge block-long bank of drying rolls in the modern Taylor mill, surges mile upon mile of Taylor Vulcanized Fibre...each inch as consistent in quality as its predecessor.

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Taylor Vulcanized Fibre is just one of the many laminated plastics developed and produced from basic raw materials to finished product in the completely integrated Taylor plants at Norristown and LaVerne.

"This Is Taylor Fibre Co." is a 24-page booklet that literally brings the entire
Taylor Organization to your fingertips. It describes how Taylor Laminated Plastics
are made, how and where they're used, and more important, how you can use these
basic materials to make your product better . . . at lower cost. Write for a copy today.



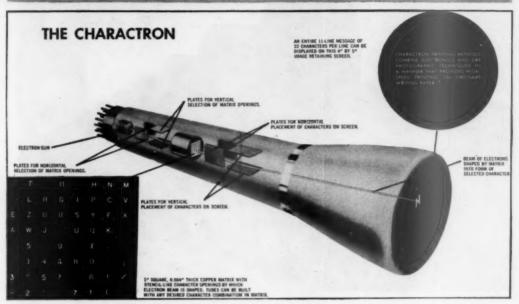
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TAYLOR FIBRE CO.

PHENOL, SILICONE & MELAMINE LAMINATES . FABRICATED PARTS

VULCANIZED FIBRE . TAYLOR INSULATION

#### PRODUCTION



CONVAIR'S PICTURE TUBE uses an electron beam to translate computer gibberish into understandable language. It is con-

nected to the output of a computer, flashes the computer's answers onto a high-speed copying machine. Developments like this help...

#### Electronic Brains Take on New Jobs

During World War II science developed the electronic computers to cut the calculating time of its complicated mathematics. Since then, many businessmen have discovered that the electronic "brains" can help some of their problems with ever increasing paperwork. The computers haven't eliminated much of the paperwork, but they have speeded up its processing.

• Specialize in Paperwork—Several firms now have computers that do week-long jobs in a matter of minutes. The firms are the type that will always have problems in paperwork—insurance companies, department stores, manufacturers whose products need extensive stock control. An insurance company, for example, can use a computer to keep track of policies. Once an application for a life insurance policy is converted into coded punches on cards and the cards are fed into a computer, the electronic "brain" can calculate the statistics on the policyholder, compute his annual premium and dividend, and, in the end, handle the final payment on the policy.

 In Fact Industry—Right now the industry that makes computers and their accessories includes more than 90 companies, mostly medium-sized specialists. But the industry has built-or is building-only about 30 computers.

The field is still in the early stages of its evolution. For it's only in the past five years that the computers have changed from scientific to business tools. But now at least two companies have put computers on a production line basis. The production model of the future will probably be more standardized, but able to perform a wider variety of jobs in commercial fields. Prices for present models range from \$575,000 to \$7750,000.

• IBM's 604—International Business Machines has a computer, called the 604, that's adaptable to a variety of office jobs. Using punched cards, the 604 performs between 20 and 60 calculating steps, simultaneously or in sequence, in a minute. Monsanto Chemical, which uses one to make up its monthly profit-and-loss statements, has cut the processing time from 15 to five days. In other firms, IBM's 604 turns out statistics for production, inventory, and engineering problems.

• Rem Rand's 409—Remington Rand, Inc., has a counterpart of the IBM computer, which it calls the 409. The first three production models are working for the Bureau of Internal Revenue; the fourth is slated for service in the armed forces, for inventory work.

• Pioneer—Atlantic Refining Co. is one of the first companies to give a computer free rein within a firm. Atlantic's attitude: "Let's buy the computer and find out how many uses we can put it to, how it can help us increase production, reduce costs."

Atlantic recently bought its first computer from Physical Research Laboratories, Pasadena, Calif.—a model designed for all-around industrial work. Its first assignment will be chemical analysis. Hooked up to a spectrometer, the computer can break down the composition of a chemical in 10 min., instead of the seven hours that are usually taken for the job.

Atlantic sees bigger projects ahead for its computer, too. One is more intelligent, over-all control of refinery operations, now done mostly by educated guesswork. Another: closer estimates of operations and profits by calculating such factors as purchases of raw materials, market prices, and the contract requirements of customers.

• Too Many Answers—Business operations have caused some minor but special problems in the use of computers compared to scientific applica-

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The meat industry, for example, depends heavily upon refrigeration to guard quality every step of the long, long way from stock yards to kitchen. And dependable Frigidaire equipment helps in many ways to provide this necessary protection.

In processing and packing plants, in dairy and baking industries, Frigidaire refrigeration and air conditioning play a huge and tireless part. In safe storage—and safe transit. In sanitation and dust-removal. In temperature control for manufacturing processes. In cooling after baking, cooking or canning. In fermentation and humidity control. The list of Frigidaire equipment users is long—varied—and important.

No matter what your business, the best answer to your own refrigeration or air conditioning problems, can be provided by your Frigidaire Dealer, Distributor, or Factory Branch. Out of more than 400 refrigerating and air conditioning products Frigidaire makes, you're sure to find one or a combination that will profit your products—and you. Look in the Yellow Pages of your phone book, or write Frigidaire Division of General Motors, Dayton 1, Ohio. In Canada, Leaside (Toronto 17), Ontario.



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Air conditioning makes better cheese! Here's wonderful cheese-ripe, rich, tasty. Made better by Frigidaire Air Conditioning that controls humidity, aging-frees the air of dust and dirt that might otherwise be part of the formula.



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Perishable foods travel thousands of miles under Frigidaire refrigeration—retain all their flavor, freshness and nutrition. Safe refrigerated railroad cars and trucks have solved countless distribution problems for food industries.



#### **How Many Water Coolers** Are Enough?

G-E Work Center Plan for Water Cooler Placement offers a new formula for quick, easy check of your own water facilities

This plan brings new information on the selection and placement of water coolers. Based on a recent General Electric study of efficiency in drinking water layouts, it tells you how to locate water coolers to cut wasted man-hours and save payroll dollars year after year.

Whether you are planning new construction or merely wish to analyze your present facilities, the G-E Work Center Plan gives you the answer. Send the coupon for your copy of the free booklet which will help you determine exactly how many water coolers are enough for you.



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COMPANY	
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". . . No computer understands English, most don't understand Arabic . . . "

BRAINS starts on p. 38

tions. Scientists feed small amounts of information into a computer and get about the same out of it. Mostly. the scientists want the computer to perform a problem that has many little calculations in it.

The needs of business are just the reverse. A life insurance firm or an industrial company feeds much more data into a computer, requires a few, simple calculations, and gets a raft of answers in return. So the present-day computer is designed for large volumes of work and general purposes.

• Five Units-The business version isn't much different from a scientist's computer, though. A complete computer

has five basic units:

· An input device-such as a punched tape or card, a movie film, or a printer-feeds data into the computer.

· A calculator works out the data (or the factors of a problem). But the calculator doesn't work out a problem entirely on its own.

· A programming unit tells the calculator how to solve the problem.

· A memory device holds the data for the calculator whenever it must drop one set of figures and pick up another.

· An output device, similar to the input device, gives the answers worked out by the computer.

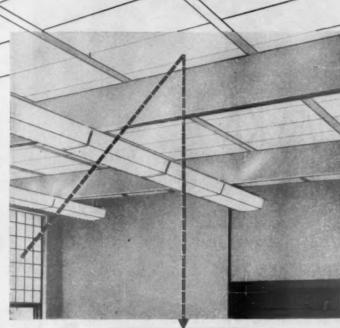
• Language Problem-But computers fall short on two points, despite their fast performance. They can't record their answers fast enough in some applications. And their answers are in a peculiar language that must be decoded.

No computer understands English, to start with, and most don't even understand Arabic numerals. So data must be translated into a special numeric code, called a binary system, that makes sense to the computer. The code uses the factors of zero and one, upon which all other numbers are based. A computer also gives its answers in this binary system, which sometimes must be put into English. But Rem Rand has one kind of computer that works directly with the alphabetical system.

· Road Block-The calculator of a computer sometimes works with the binary system faster than ordinary recording devices can handle the answers. The reason is that the electronic operation of the calculator is miles ahead of the mechanical operation of the output de-

The computer manufacturers are wise to this failing, though. And some researchers are working on recording





Kaylo Insulating Roof Tile | Reflects Light

#### ... Requires No Painting or Other Treatment!

Kaylo Roof Tile provides a lightweight, insulating roof deck and at the same time forms a completed ceiling. For Kaylo Tile's smooth, near-white undersurface has a light reflection factor of approximately 80 per cent-and the tile need not be painted. Thus, a Kaylo roof deck makes it possible to save the cost of constructing a ceiling.

A Kaylo roof deck weighs only 6 pounds per square foot, yet the tile has more than sufficient strength for typical roof loads. This means that a lighter structure readily supports the lightweight Kaylo deck-and permits important savings of steel.

Kaylo Roof Tile saves on insulation costs, too. Because Kaylo Tile, a hydrous calcium silicate, has insulating value equal to one and one-half inches of standard insulation board-adequate for usual installations. Kaylo Roof Tile is incombustible: it resists water damage and is rot and vermin-proof.

The ease and speed with which Kaylo Insulating Roof Tile can be handled and placed also contribute to economical construction-forming a roof deck with advantages you will appreciate over the years.

> WRITE FOR FREE BOOK—"Kaylo Insulating Roof Tile." Address: Dept. N-318, Owens-Illinois Tile." Address: Dept. N-318, Owens-Illinoi Glass Company, Kaylo Division, Toledo 1, Okia



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". . . Researchers are working on devices that will make a fast talker out of a stammering computer . . ."

BRAINS starts on p. 38

devices, called read-outs, that will make a fast, understandable talker out of a stammering computer:

· Consolidated Vultee Aircraft Corp. has an electronic picture tube. similar to that used in a television set, that converts computer talk into a readable picture at 10,000 characters per second.

· Control Instrument Co., a division of Burroughs Adding Machine Co., has a high-speed printer for computers that writes up to 1,000 lines per min.

· Computer Research Corp., Hawthorne, Calif., is working on a read-out-scheduled for completion by next February-that combines a magnetic tape and a printer, running at high speeds.

· Potter Instrument Co. last month announced a printer, dubbed the flying typewriter, that runs at 24,000 characters per min. (BW-Mar. 15'52.p117).

Industry experts generally agree that fast readouts such as these will speed the development of computers, especially in business fields. In many jobs, they will replace the cryptic punched tapes and cards where direct copies are needed.

The Convair read-out is the fastest that has vet been designed. The electron beam inside the picture tube (picture, page 38) is first sent through a numbered and lettered plate and then on to the viewing screen. The beam is shaped into the desired letter or number as it passes through the plate.

The stencil-like plate-the heart of this tube-is cut with a combination of letters and numbers to suit the output of its computer. A converter, hooked in between the computer and the tube, changes the computer's answers into electrical pulses that represent the characters on the plate. That way, a computer could work out the factors of a vibration analysis. And the picture tube could show the answers in numbers. The same operation might be applied to stock control in a company.

The picture on the screen can be put into printed form by a process called Xerography, a development of Haloid Co. (BW-Oct.30'48,p58). It is a special kind of photography that uses dry materials instead of wet chemicals for developing the copy. The printing equipment is mounted in front of the screen, turns out copy as fast

as it appears.



#### Get the inside story before you buy any dictation system

When you bought your last car you looked "under the hood." And we urge you to do just that, before buying a dictation system. It tells you why AUDOGRAPH'S uncluttered, functional interior gives better performance. And why versatile AUDOGRAPH increases office output up to 30%.

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Nowadays, an important part of many collective bargaining agreements is the Group Insurance to be provided.

And before your discussions of this subject, you ought to know:

- What a complete plan—including Life, Accident, Sickness, Hospitalization, Surgical, and Medical-expense Insurance—will cost.
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To get complete and up-to-date information on these important points, ask your Travelers agent or broker to bring around a Travelers Group Insurance man.

These Travelers field men are specialists at setting up and administering Group Insurance plans. They are local men whose skill and experience are made available to businesses all over the country by the continent-wide service organization of The Travelers.

Your Travelers Group Insurance man is familiar with the various plans in effect in your industry. He can tell you of the latest insurance developments in connection with collective bargaining agreements, in your locality and over the nation.

Above all, he can help you work out a Group Insurance plan under which all claims will be processed efficiently and paid promptly by local claim men. The Travelers handles claims locally anywhere in the country through 220 Claim offices—more than any other company writing Group Insurance.

To be sure your Group Insurance plan is well planned, call your Travelers man early.

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#### The Travelers

The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, The Charter Oak Fire Insurance Company, Hartford 15, Connecticut.



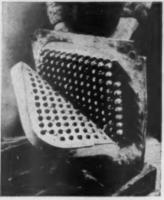
LARGE BLOCK of phenolic foam cut from formed five-ft. cube is easily hefted.



PRECUT SLABS of foamed plastic make packaging of fragile items easier.



----



FOAMED seat cushion comes from oven with tough skin that easily strips from mold.

#### FOAM USES LET . . .

blows foam into mold.

#### Plastics Crash a New Field

Plastic developers will tell you that the range of applications of their material is limited only by the imagination.

Right now emphasis is being put on foamed plastics—materials that are blown full of holes like a fine frothy sponge. Almost daily, plastics engineers are introducing new forms for new industrial uses.

Recent example: a foamed phenolic resin that may soon challenge excelsior and shredded paper as a packaging medium. The resin is made by Bakelite Co., a division of Union Carbide & Carbon Corp., New York. One big advantage of it is that the foamed plastic can be produced from the resin at the place it will be used—say, in a depart-

ment store's packaging department.

• Lab Work—Bakelite had been experimenting with the foamed phenolic for several years. About two years ago the company decided they had the right characteristics for the material, but the rub was that phenol, the basic ingredient, was in tight supply. So to test the foamed phenolic in industry as a packaging material, Bakelite teamed with a single potential user, Miles Kimball Co., an Oshkosh (Wis.) mail order house.

After a few months of trial, Miles Kimball went into production of the foamed plastic from Bakelite's resin and has since been using the foam for packaging at the rate of 250,000 cu. ft. a year. Experiments also are being con-

#### Harmon Elliott Talking

In 1929 I thought I was going to be forced into a merger of Addressing Machine Companies, and I was very happy when I heard that the United States Attorney General would not sanction such a merger.

Because we were permitted to remain an independent manufacturer, the public today has two totally different kinds of mechanical addressing equipment to choose from.

Here are a few of the things you can choose.

- 1. Visible Addressing versus Face Down Addressing
- 2. Non-Metallic Address Plates versus Metal Address Plates
- 3. Your addresses impressed in your address plates with typewriters or with punching presses
- 4. Indexing your Address Cards by typing or writing on them or by fastening a paper index card to them
- 5. 19" filing drawers holding 360 address cards Total weight 3 lbs., 10 oz.

versus

19" filing drawers holding 175 address plates Total weight 11 pounds

The Elliott Company has become the world's only stencil addressing machine manufacturer and our new address card Softeners make it possible for any typewriter (Electric or Manual) to stencil perfect addresses in the new Elliott Address Cards.

If you are still using metal address plates, you will be very much interested in a booklet I have just written entitled Stencil Addressing from 1852 to 1952.

May I send you this booklet?

H.B. Elliott

151-N Albany Street Cambridge 39, Mass.



#### "big lift" depended upon men like Henry Roessig...

During the Berlin blockade, round-theclock flight schedules sent the demand for replacement parts soaring. One critically-short part was a carburetor for auxiliary engine-generators. Trouble was, the original manufacturer had long since scrapped the tooling.

A new source had to be found. And it was: Daco. Without benefit of blueprint, the Daco Staff, Henry Roessig included, took on the entire job-from blueprint to final assembly and testing. Within three months they turned out 100 carburetors-despite the fact that orifice tolerances had to be 0.0001 in. or finer...that over 100 precisionmachined parts were needed for each carburetor.

With over 20 years' experience as designers and fabricators of precision tools and dies for instrument production, Daco has the ability to take jobs like this in stride. And with its instrument knowhow, Daco is responsible for entire instrumentation programs. Daco handles these programs from initial design stage to final assembly. If you have an ins.rumentation problem, it will pay you to discuss it with Daco.

#### Do you have an Instrument Production Problem?

Daco may be the answer, as it was with these tooling and instrument

Gun Sights: machine gun, cannon

**Aerial Carburetors Flight Instruments** 

**Aerial Pumps** 

"Classified" assignments in electromechanical controls.

DACO MACHINE & TOOL COMPANY 202 Tillary Street, Brooklyn 1, N. Y.

. . . experience with the material indicates reduction of packing time and worker fatigue . . ."

PLASTICS starts on p. 45

ducted by R. H. Macv & Co., New York's largest department store. Now that phenol is no longer in short supply, the market for foamed phenolic is wide open.

• Selling Points—Big advantage of the foamed phenolic is its light weight, about 1 lb. per cu. ft., which is a small fraction of the weight of shredded paper or excelsior, depending on how tightly these two mediums are packed. Light weight means a lower shipping charge, which means that packages that ordinarily go by express may be under post office maximum weight limits.

Because the phenolic foam is used in the form of slabs, articles being shipped are simply pressed into the slab to form the cushioning cavity. Heavy items are packed parallel to the foam grain for maximum support, while fragile glasswear and ceramics usually are pressed into the end grain so they won't shift against each other and break. Small pieces of the foam can be broken off to fill odd cavities in the carton. Bakelite says this over-all cushioning scheme involves less breakage than with shredded paper or excelsior.

Another big dividend is the material's flame resistance. It will char, but even this will stop as soon as the flame is withdrawn.

This is a real advantage to reduce the fire hazard normally involved with shredded paper or excelsior filling.

· Make Your Own-Foamed phenolic costs about 18¢ to 20¢ per cu. ft. foamed at the place of use, as against about 9¢ to 15¢ for shredded newsprint, and as much as 30¢ for shredded parchment used in fancier packaging.

The foaming equipment is designed by Bakelite, but the user fabricates it himself. Cost is between \$10,000 and \$12,000. Essentially, it is a stirring tank and expandable form for foaming. At a temperature of 59F to 77F, air is beaten into the liquid resin with an electric stirrer. Next, an acid is stirred in very rapidly. In 10 to 15 seconds after this, the foaming takes place to fill the form in which the material is made. Two operators can turn out 700 cu. ft. per hour. Ventilation is required to get rid of the formaldehyde vapors generated in the process.

· Other Uses-Packaging isn't the only field Bakelite sees for the foamed phenolic. High on the list of its potential uses is that of insulation for refrigerators and house walls. One Bakelite development engineer believes that



for Instruments and Instrument Tooling

# 



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Wherever Chrysler Industrial Engines operate they are never far from quick service and fast parts delivery. Besides the Industrial Engine Dealers and Service Points shown, Chrysler's mammoth Parts Depots, stra-

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shatterproof

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The sensational new material for shatterproof skylights, windows, walls and partitions

Installs for less - Saves on light cost



SIDEWALL INSTALLATION at Douglas Aircraft, El Segundo, Calif. replacing corrugated metal siding with Alsynite panels. No special framing needed.



ALSYNITE is a new kind of structural glass made by combining glass fiber with resin. It lets light through but can't be seen through. It is shatterproof, permanent and feather-light... is, as easy to use as plywood. Ideal for new or existing buildings. Corrugated Alsynite nests with all standard corrugated roofing and siding. Flat Alsynite substitutes for glass in standard windows. Get better light and save money with shatterproof Alsynite. Seven color tints for decorative uses. Plants in California, and Ohio.

Camornia, and	i Onio.
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NAME	
COMPANY	
ADDRESS	
COVY	STATE

DISTRIBUTORS IN PRINCIPAL CITIES

it might even be feasible to rig up portable foaming equipment for operation at a building construction site, similar to the way concrete is delivered readymixed by truck. The foaming truck would kick out a large block of the material, which could easily be cut in sizes needed for insulation.

 Sister Product-Bakelite has another product-foamed Vinylite-that is somewhat similar to foam rubber and has many of the same uses.

Now a new and inexpensive method is available to foam the basic Vinylite plastisol (resin dispersed in a liquid) into a material that has rubber-like characteristics, but with greater flame resistance, in addition to properties of high resilience and light weight. Cost is comparable to that of foam rubber in the fabricated form.

• Joint Operation—The process and the plastisol were developed recently by Dr. Edmund H. Schwencke of Elastomer Chemical Corp., Nutley, N. J., with cooperation by Bakelite. Elastomer makes the equipment and plastisol, the customer does the foaming.

The basic compound, gas pressure, and cure temperature can be varied to give a foam density varying from 12 lb. to 18 lb. per cu. ft. Degree of softness also can be controlled, as well as color.

Plastics men see the material as a natural for lamination with textiles or with Vinylite film and sheeting for furniture upholstering.

more, Md., the new plant will increase the company's research facilities as well as add to its manufacturing capacity.

Sewer digging has been speeded up by Michigan Sewer Construction Co. of Detroit by using tunneling machines developed by the company when a shortage of manual laborers threatened to slow up construction.

An electronic robot "more sensitive than human hands" feels the contours of a master pattern and machines exact duplicates more accurately and faster than manual operation. The follower, called the Single Motion Duplicator, is a product of Raytheon Mfg. Co.

Plastics problems of customers will be solved in a preform molding laboratory that's going into operation at Pittsburgh Plate Glass Co. Primary job of the laboratory, however, will be research and development of the company's Selectron molding techniques for its plastics.

Chemical ingredients in plastics can be identified by colored spots and the distance they travel on a piece of blotter-like paper, according to a Westinghouse Electric Corp. scientist. The new method may mean better, stronger, or more versatile plastics because of a better understanding of the chemical composition and structure of the plastic.

#### PRODUCTION BRIEFS

An odorless latex for use in foamed cushioning has been announced by the research laboratory of Goodyear Tire & Rubber Co.

Dacron, one of du Pont's synthetic fibers, will be woven into cloth at a plant started at Kingstree, S.C., by Princeton Worsted Mills.

Sealing of corrugated cartons by spot glueing of machine-glazed kraft paper is said to be the first new carton-sealing process approved by the railway classification committees in many years. It is the patent of James O. Tilly, Tulsa, Okla., and will be licensed soon.

Electrically welded tubing can be made from nonferrous metals by use of a machine developed by the Yoder Co. of Cleveland, Ohio. The manufacturer believes that the machine will produce tubing of a quality comparable to conventional resistance-welded steel tubing.

Industrial brushes will be manufactured in a plant recently opened by Pittsburgh Plate Glass Co. Located in Balti-



#### Big Piece of Plastic

Plastic parts are getting bigger and bigger. This door liner for a refrigerator is molded in one piece by Amos Molded Plastics for Admiral Corp. The liner, said to be the largest yet molded in one piece, weighs 7½ lb., has built-in shelves, racks, and compartments.



#### are serviced by American Linen Supply Company of Chicago, Ill.

#### **Cotton Towels\* Have Kept Hammond Washrooms** Clean and Tidy for 19 years



Here's How Linen Supply Works . . .

You buy nothing . . . your linen supply dealer supplies everything. The low cost includes cabinets, pickup and delivery, provides automatic supply of fresh-ly laundered towels and uniforms. Quantities can be increased or decreased on short notice. Local service is listed in your classified book under SER-VILINEN, LINEN SUPPLY TOWEL SUPPLY.

• The product of the Hammond Instrument Company of Chicago has long been known as "music's most glorious voice." Pictured above is the newest achievement of Hammond pioneering in the field of musical instruments-the beautiful Chord Organ. While Hammond management and craftsmen are continuously experimenting with new ways of improving plant and product . . . cotton towels have kept the washrooms in all four Hammond plants clean and tidy for 19 years. You can be sure, too, their employees appreciate the extra comfort afforded by soft absorbent towels.

Whatever your towel problem . . . whether you operate a factory, institution, office or store...you can be sure that soft, gentle, absorbent cotton towels will do the best job in promoting employee morale, building customer good will, increasing tidiness in your washrooms and cleanliness among your employees. Cotton towel service is economical, it's efficient and it's a sign of good management.

#### Clean Cotton Towels...

Sure Sign of Good Management

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#### **NEW PRODUCTS**



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#### Air Foam Fights Factory Fires

Air Foam was used extensively for fighting fires on aircraft and ships during World War II. It smothers flames by cutting off the air rather than extinguishing them by cooling as is done by water.

Now Air Foam, developed by National Foam Systems, Inc., has been combined with an automatic sprinkler system for industrial use against liquid or chemical fires. The system is also useful where water supply is scarce or drainage a problem.

Air Foam consists of closely knit airfilled bubbles and will float on top of even the lightest flammable liquids, thus smothering the fire. Water would be ineffective because the burning liquid would float on the water and continue to blaze.

Installation of an Air Foam sprinkler has been completed at the Syracuse (N. Y.) plant of the Solvay Process Div. of Allied Chemical & Dye Corp. It's located in the chlorination and

distillation buildings, where benzene and benzene derivatives are processed.

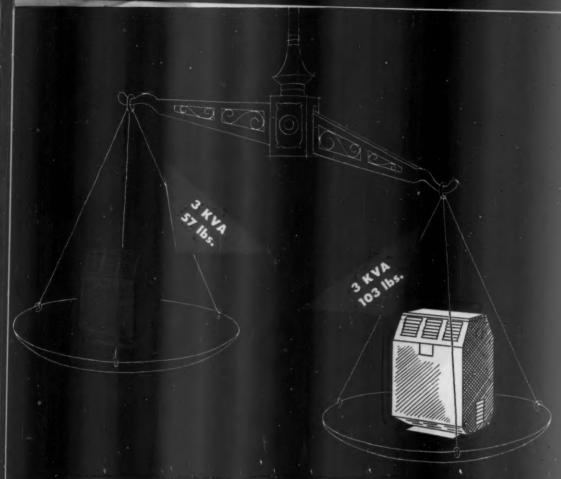
The installation was designed and installed by the Automatic Sprinkler Corp. of America. It combines the use of discharge outlets with the foam injection system. For the first 10 minutes of operation, Air Foam is discharged from the outlets; after that, the outlets will discharge water spray for as long as is desired.

• Source: Automatic Sprinkler Corp. of America, Youngstown I, Ohio.

#### Safe Transit for Acid

Plax Corp., Hartford, Conn., has what it believes to be the first smashproof shipping container for poisonous or corrosive acids and other caustic material.

The large plastic bottles, similar to the small containers now used for spray cosmetics, are being manufactured in 6½-gal. and 13-gal. sizes for domestic or



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This is typical of the tremendous strides made in the production of better electrical apparatus, longer lasting wires and cables, with the help of Fiberglas yorns If you're making or using electrical equipment, it will pay you to specify Fiberglas Electrical Sales Division, Owens-Corning Fiberglas Corporation, Dept. 3, 16 East 56th Street, New York 22, N. Y.

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### Comptometer

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overseas shipments. They are made from Bakelite flexible polyethylene. The plastic walls of the chemically

The plastic walls of the chemically inert bottles are pliable, so they won't break or explode from freezing or from ordinary internal gas pressures. The manufacturer hopes that increased safety will mean lower insurance costs.

Other advantages claimed are the decreased weight of the containers and decreased shipping space needed since there will be less need for protection.

• Source: Plax Corp., Hartford, Conn.

#### **NEW PRODUCTS BRIEFS**

A prefabricated frame for sliding doors can be installed in 20 min. or less and won't warp, according to the manufacturer, Jay G. McKenna, Inc., Elkhart, Ind. The unit includes the track assembled with hangers in place.

Material handling on irregular floors is less of a problem when industrial equipment has spring action casters. A spring connection creates a shock absorber, permits the wheel to rise and fall with the floor's irregularities. They are a product of Faultless Caster Corp., Evansville 7, Ind.

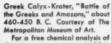
A window for rolling doors has been designed by Cornell Iron Works, Inc., Long Island City, N. Y. The windows, which come in various sizes, roll up with the door without obstructing normal operation.



#### Wastebasket Has a Liner

A removable steel lining makes this leather wastebasket fireproof and stainproof without detracting from its appearance. Price is about \$12 from the American Binder Co., Inc., 230 Taaffe Pl., Brooklyn, N. Y.

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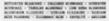
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#### LABOR



STRIKES against communications are a symptom of labor's new mood. Unions are . . .

#### Driving a Harder Bargain

They all want to be as tough—and as well rewarded—as the Steelworkers. WSB faces one battle after another as the spring crop of contracts comes up.

Strikes in the communications industry against Western Union, Western Electric, and the Bell Telephone System are signs of a new, militant atmosphere in labor. They show that unions are ready to use economic pressure to back up wage demands.

So far, most unions have been content to let the United Steelworkers (CIO) lead the way in pushing wage boosts through the Wage Stabilization Board, then getting them put in effect. But the pressure is increasing. Once the additional cents per hour show up in steelworkers' pay envelopes, there'll be demands all along the line in industry. All labor sights will be on a comparable raise figure (page 30).

• Cases in Point—That became clear

this week in a whole series of situations:

• At Continental Can, the United Steelworkers (CIO) demanded that the company use the steel stabilization formula—for 17½¢ in raises, in three instalments—in raising pay in a wage reopening. Continental refused, so USW announced a strike.

• In shipbuilding, CIO's Industrial Union of Marine & Shipbuilding Workers has set a strike deadline for the end of this month at eight Bethlehem Steel Co. yards on the East

Coast. IUMSW wants a settlement on WSB's steel recommendations as a "compromise" from its original demands of a 20¢ raise, a \$3,000 guaranteed annual wage, and a union shop for 32,000 Bethlehem employees.

• Even before the steel showdown, some 23 unions in the oil industry, led by the Oil Workers International Union (CIO), had joined forces to go after a 25¢ hourly increase (BW-Mar. 8'52,p170). OWIU set a strike date, and the White House-concerned over a shutdown of oil refining-referred the dispute to WSB.

 Oil Background—It was clear from the start that WSB had a rough problem on its hands. Oil unions, and particularly the pace-setting OWIU, want to establish industry bargaining or, failing in that, companied bargaining. Companies strongly oppose either pattern. They insist that contract negotiations must be governed by local conditions.

This issue came up when unions called on WSB to consolidate 70-odd oil cases into a single proceeding. Companies demanded that cases be heard one by one. Hoping to save time, WSB worked out a compromise: panels to hold four "pilot" hearings. Recommendations based on the four hearings

would, theoretically, be applied to all 70-odd disputes.

Ocompanies Balk—WSB's plan ran into a snag. The four companies that were called refused to attend "pilot" hearings before WSB panels. Their attitude may show WSB's new low in prestige following its much-criticized steel recommendations.

Sinclair Oil Corp., which has a companywide contract with OWIU ending June 30, objected to being considered a "typical" case. It told WSB it is willing to "meet any bona fide increases in generally prevailing wage standards of competitors," but doesn't believe "any useful purpose" would be served by going through a panel hearing.

ing through a panel hearing.

Standard Oil of Indiana protested that the board procedure would not provide "sufficient safeguards for maintaining local collective bargaining." Instead, the company complained, the plan would tend to impose "multicompany, industrywide bargaining" in oil.

industrywide bargaining" in oil.

The panels went back to Washington for conferences with WSB. Meanwhile, OWIU renewed strike threats. The union said oil workers would walk out unless WSB goes ahead with hearings quickly—with or without management sitting in.

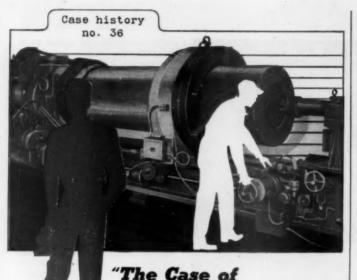
#### I. On the Docket

Oil is just one worrisome problem for WSB. The board also has aluminum, aircraft, and brass industry cases, referred to it by the White House. These disputes now stand like this:

Aluminum: Hearings have been completed in a dispute involving the United Steelworkers (CIO) and Aluminum Co. of America and Kaiser Aluminum Co., and the Aluminum Workers Council (AFL) and Alcoa. The unions want 18½ hourly increases and other contract benefits—a "package" similar to that originally sought by USW in the steel industry. WSB has held up recommendations, presumably to await the outcome of the steel wage showdown.

Aircraft: The board is weighing a union-shop demand by the International Assn. of Machinists (AFL) at Boeing Airplane Co.'s big Wichita plant. A WSB panel heard arguments on that and other issues last January. Since then, pay and other questions have been cleared up by bargaining. WSB is left with only the union-shop issue—a hot potato it would like to be rid of.

Brass: A WSB panel recently proposed (subject to board approval) a 15¢-an-hour pay hike for 16,000 employees of 13 copper and brass rolling mills and fabricating plants. The 15¢



the Wandering Machinist!"

Many companies today face the serious problem of skilled labor turnover involving the loss of men to competing industries, men specially trained at considerable time and expense. As demand for skilled labor increases in heavily industrialized areas all over the country, more and more companies are finding that these "wandering machinists" cost a lot of money in "breaking in" costs and loss of production.

C&O Industrial Development Department surveys show that for many companies, the answer to this problem can be found in plant sites in small, up-and-coming communities in C&O's Center of Opportunity. Here, right next door to major markets, with adequate labor supply, favorable taxes and first class transportation, these companies can build their future and the future of their employees as vital parts of one of these communities.

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"... Guaranteed wage for the auto industry has suddenly become a hot issue for right now..."

BARGAINING starts on p. 55

is satisfactory to the United Auto Workers (CIO), which bargains for the group. But the industry is fighting the recommendation before WSB. It contends: (1) The amount is more than workers have coming to them under federal rules; (2) it is "disruptive" because many companies and unions have already negotiated 5¢ and 9¢ raises; and (3) it is an unjust "uniform wage recommendation without regard for individual problems." With the 15¢ figure already publicized, UAW says it won't accept less.

#### II. Headed Toward WSB

Meanwhile, other disputes may come to WSB as a result of bargaining deadlocks in a variety of industries:

Electrical: Both the International Union of Electrical Workers (CIO) and United Electrical Workers want raises although neither is doing much about it right now.

IÜE threatens a nationwide strike against General Electric May 15 if its wage demands haven't been met by then. But there have been no negotiations since Mar. 20, and none is scheduled before May 5. There's a simple reason: IUE wants to see what USW gets before it settles down to hard negotiating.

UE's bargaining policy will be set at a national conference this weekend in Buffalo. So far, usually militant UE isn't talking seriously about a strike.

Both IUE and UE also have reopened Westinghouse Electric contracts on wages. Bargaining between IUE and Westinghouse is complicated by a dispute in Pittsburgh over seniority: The company wants "occupational seniority" written into union contracts; IUE wants plantwide seniority continued.

The Radio Corp. of America contract with IUE at Camden, N. J., is also reopening this spring, and RCA's pact with the International Brotherhood of Electrical Workers (AFL) in Indianapolis expires in June.

Automobiles: Contracts of the United Auto Workers (CIO) are frozen until mid-1955. UAW auto workers get costof-living and 4¢ annual-improvementfactor raises, the latter due June 1.

But steel recommendations have had one big effect on UAW plans: They have made guaranteed-wage projects a matter of present rather than future interest. When 2,500 UAW delegates met in Cleveland recently for an educa-

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". . . John L. Lewis is more than ever a puzzle this year. Industry closes ranks . . ."

BARGAINING starts on p. 55

tional conference, a wage-guarantee plan was high on the agenda for discussion.

Later, the union indicated that talks with employers will start in the fallprobably in exploratory discussions with General Motors.

Aircraft: UAW stirred the aircraft industry last week with another proposal. It called on a key company, North American Aviation, Inc., in Los Angeles, to "agree to pay the same rates as the automobile companies pay for air-craft work." It said: "We'll talk about cents per hour later."

North American objected, saying it shouldn't be compared with an auto maker doing aircraft work any more than with a rubber company or an electrical manufacturer that had a sideline in aviation. It offered a 5¢ raise, to put its wages on a par with Douglas Aircraft.

North American and other aircraft companies object to UAW's new proposal for an obvious reason: If UAW should succeed in forcing aircraft companies to accept auto makers' aircraft rates, it could go a short step further and force the aircraft industry to swallow auto wage rates in general.

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valuable dust

and efficiency

in your plant.

Boeing's contract with IAM at Seattle expires in June. Consolidated Vultee. Douglas, and Lockheed contracts expire or are reopenable in August. Glenn L. Martin, Fairchild, and McDonnell have settled this year for "escalator" con-

Farm machinery: International Harvester's pact with the Farm Equipment Workers Division of the United Electrical Workers expires in June. International Harvester also has a contract covering 24,000 employees with the United Auto Workers (CIO). Since the UAW pact has an "escalator" clause and a 1955 expiration, UE is planning how to top UAW's c-of-l gains.

Coal: John L. Lewis is more than ever a puzzle this year. He hasn't given a public hint of plans by his United Mine Workers. But don't be too surprised if it turns out that Lewis wants a 30-hour week with no cut in pay, plus another increase in the union's royalty on all coal production.

And don't be surprised, either, to find stiffer-than-usual resistance by industry to whatever new demands Lewis decides to make. Soft-coal producers reportedly have drawn their defense lines tighter by adding most Indiana and Illinois operators to the Bituminous Coal Operators Assn.-which bargains for the industry, with Harry M. Moses calling the signals.



# Formica super-insulators safeguard new superliner



CHASE-SHAWMUT 39-AMPERE AMP-TRAP can clear a prospective short circuit in the S.S. United States in 138 millionths of a second! The Formica glass buse tube at right gives the Amp-Trap excellent electrical insulation, high heat resistance and great mechanical strength.

#### FORMICA'S SUPER-INSULATORS

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WORK-STAINED HANDS aren't exclusive property of housewives, women discover as they watch . . .

#### Husbands at Work

Wives tour International Harvester plants to get an idea of how the breadwinner earns his pay check.

Except for some beefing, most workers don't talk much at home about their jobs. Wives generally have only a hazy idea of just what their husbands

do all day at the plant.
International Harvester intends to change that. It's inviting wives of employees at its manufacturing plants to spend a day at the plant, get a look at their husbands' place of work, and generally get acquainted with I-H operations.

· Everybody's Happy-The program was tried out about a year ago. It is now going strong in six plants, and will soon start in 15 more.

International Harvester's program differs considerably from the ordinary plant open house for employees' families. The point is to give wives a look at their menfolks at work under normal, everyday conditions.

Plants set aside one day a week for visits of about 50 women at a time. Each department gets a turn at inviting wives: Unmarried men can invite mothers, sisters, or fiancees.

· Revealing-The wives are taken on a guided tour of the plant, get to see their husbands at work if they are in a stationary job and their shift is on the job. Luncheon is served in the company dining room or cafeteria, with management representatives as hosts.

The women are encouraged to ask

questions about their husbands' jobs, company operations or policies, or anything else connected with International Harvester.

Sometimes this develops into a lively hour for company people, and potentially for husbands. More than once a wife has wanted to know why her husband couldn't get away from the plant as soon as his shift ended or collect overtime for an extra hour or so. The answer called for some careful diplomacy, since the husbands really had left at the end of the shift.

After the luncheon, the women see sound films of company operations that they couldn't see firsthand.

• Social Event—The visitors are carefully guarded against any possible harm. They are steered clear of dangerous places, and kept away from any machinery that isn't 100% safe. Guides watch out for clothing hazards, too. As a result, the plant visits are getting the reputation of "dress up" affairs in plant communities—which may account for the more-than-50% acceptance of invitations extended each week.

That's a high figure because many women with small children have to turn down their bids. I-H encourages them to show up for any part of the program they can—preferably the luncheon.

International Harvester has noted some improvements around the plants since the program started-especially in plant housekeeping. The men are keeping their working areas as shiny as possible, to put on a good front when their wives-or fellow workers' wives-come through.

#### Unions Tell Employers: Attend Talks—or Else

Contractors in St. Louis got a sharp ultimatum from AFL lathers and plasterers unions last week: No absences will be permitted at joint bargaining sessions this week.

The unions and contractors have been bargaining off and on since early in December on terms of a contract to replace one that expired Dec. 31. Sessions frequently bogged down because not enough employer representatives showed up.

Last week the unions sent letters to all contractors:

"No excuse, except sickness and a doctor's certification of same, will be accepted. Any contractors failing to attend will have no journeymen on their jobs the following Monday and thereafter until they negotiate an individual agreement with the unions at the unions' convenience."

And, the unions clearly implied, there may be delays before they can get around to individual bargaining.



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JOSEPH RYAN and employers say it is most efficient, economical way.

## ILA: Dock Union Is Pariah To Labor Movement Itself

With this report on the International Longshoremen's Assn., Business Week begins a series of appraisals of major American unions—designed to fill a gap in management's information.

In the last few years the International Longshoremen's Assn. (AFL) has developed a reputation so unsavory that high-level union leaders, whose devotion to the AFL is beyond question, have begun to criticize it publicly.

It takes a big reason to get labor leaders on the record against another union in their own organization. When Westbrook Pegler and others like him were exposing corruption spots in some AFL affiliates, their criticisms never found an echo in labor ranks.

Pegler, incidentally, paid very little attention to the ILA, concentrating most of his fire on other labor organizations. The ILA achieved its status as pariah union without much help from any single individual, whether laborbaiter or reformer. It may not be so bad as its reputation, but it is clearly riddled with crime, rackets, and corruption.

• Tough Men-The ILA operates in one of the toughest industries in the world. Everywhere, waterfront labor means hard work done by tough men. But in ILA's territory—the Atlantic Coast and especially the port of New York—tough-guy methods, mayhem, and murder are standard, not unusual and occasional incidents.

This does not mean that such methods are condoned by the long-shoremen. An overwhelming majority of them are honest, decent, religious men. They are, however, victimized and made captives by a system of organized corruption.

Recent labor troubles on the waterfront, culminating in the wildcat strike last fall, made a local situation, pretty much taken for granted, a national crisis.

The State of New York has established a board of inquiry to investigate the strike, and a crime commission has been directed by both New York and New Jersey to clean up the waterfront problem.

#### I. Sources of the Trouble

Much of the turbulence stems from the nature of waterfront work, with its requirement for "tough" labor. Some arises from the isolation of the waterfront community, which has its own

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special set of mores. A good deal can be laid to the account of primitive hiring practices, to which management is attached with as much devotion as the union.

But many others can be traced directly to the structure and policies of ILA.

 Weak at Top—Despite the popular belief that most undesirable union practices can be traced to a union dictatorship, the fact is that ILA's principal trouble develops from there not being enough authority at the top of the organization. District and local units have virtually complete autonomy. They are, in many cases, independent feudal baronies paying only nominal allegiance to the international union hierarchy.

Joseph A. Ryan, the international president of ILA, has less real power over his union locals than almost any union president in America. Few labor leaders have ever had the humiliating experience that was Ryan's in 1948 and 1951, when he stood by with abject futility—a failure in efforts to stop wildcat strikes by his members after he had used every device at his command.

The basic unit of organization in the ILA is the local union. In the port of New York—where ILA has nearly 40% of its strength—locals have asserted unofficial jurisdiction over piers or groups of piers to the point where any local trying to move in on another's jurisdiction runs the risk of starting open warfare.

Last year the Grace Line planned to move some of its New York operations from Pier 45 to Pier 56. It hasn't been able to do it yet-because of threats made by the local that controlled Pier 45. This local union power is great enough to shape and change management decisions.

• The Shape-Up—It is often charged that this local power developed from gangsters taking over local unions. But there is more to it than that. The shape-up hiring system—called a source of much waterfront crime and corruption—encourages workers to return to a pier where they worked in the past.

The shape-up method works this way: Each morning at 7:55 workers who want jobs form a semicircle around the outside of a pier. A hiring boss then selects those he wants and tells the others to go elsewhere. Theoretically, he chooses those men he knows can best perform the particular job for that day. At the end of the day, unless the men are told otherwise, they are dismissed from the job. It doesn't matter whether they have been longshoremen for five days or 50 years-a job lasts one day. It is apparent at once that anyone with an inside track to the hiring boss has a better chance of getting work regularly. An inside track can frequently be bought for a price or a favor.

Longshoring has created self-contained little communities of its own within New York and other port cities. And longshoremen have a tradition of going to the nearest docks to their homes for work as though they were in a one-industry town. Even when they move to other parts of the city, they return to their old docks—and their old locals. This habit—and the longshoring occupation—often goes back two or even three generations.

• Little Nations—Another factor that

• Little Nations—Another factor that keeps men coming back to the same place for work is the nationality lines that are drawn on the waterfront. Originally, the docks were worked by Irish immigrants almost exclusively. Later, Italian immigrants began taking jobs on the waterfront. Today, although New York piers are worked by men of every nationality and race, the Irish still dominate West Side Manhattan piers, while Brooklyn and East River docks are controlled by what longshoremen call "the Italian locals." There is even one Negro local in New York. National rivalries help keep the union in internal uproar.

• Just Muscle—Since physical strength is almost the sole qualification for dock jobs, anyone can become a longshoreman simply by appearing at the docks for the shape-up. Anyone—by paying an initiation fee of a few dollars—can become a member of ILA. Note this fact: The ILA is what is known as an "open union." Anyone can join and must, under its union shop contracts, if he wants work on the docks.

#### II. Permanent Surplus

The casual nature of the work and the fixed labor force create a constant labor surplus. That, says the union and employers, is a necessary condition, because tides and weather make it impossible to predict to the hour or even the day when a ship can be loaded or unloaded. Therefore, the only way to be sure of an adequate supply of labor to meet peak demand is to have a big pool to draw from. But independent studies—which accept as necessary the idea of a labor surplus—say the surplus has always been too big.

Nevertheless, the union and the employers defend the shape-up as the most practical and efficient system for hiring men to perform the necessarily irregular work on the docks.

• Exconvicts—There are other features that distinguish the ILA from other unions. One is the disproportionate number of exconvicts employed by many local unions and stevedoring companies. ILA president Ryan claims that only humanitarian principles are behind their employment. Others have suggested that some are hired to preserve various aspects of the status quo

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Hiring bosses of the piers are also allowed to join ILA locals, and in many cases they are actually officials of their unions. An outstanding example is Ed Florio, a New Jersey hiring boss, who also happens to be president of Local 306 in Hoboken, N. J. This situation is roughly analogous to a General Motors personnel director being at the same time president of a local of CIO's United Auto Workers.

Organized pilfering gangs also plague shippers, but the shippers generally can do business with the racketeers at a price somewhat less than it would cost them to try and fight them. As one steamship company executive said, "It's a little cheaper, and besides, how do I know that they won't put a cargo hook in my back just like they do to their competitors?"

#### III. Workers Apathetic

This same kind of apathy and fear infects the longshoremen themselves, but, unlike the shippers, they can't do business as usual. Figures for the industry are at best inaccurate and incomplete, but, in 1950, less than 25% of all longshoremen in the port of New York earned more than \$3,000 before taxes. More than 50% of the 36,000 dockworkers failed to work the 800 hours a year that would qualify them for a one-week paid vacation. When vacations are paid, the money comes from a central fund set up by the New York Shipping Assn.

The \$2.10 rate ILA got under its latest contract sounds like a good deal. Compared with other industries, ILA rates have always been high, but hours worked are low. Besides, though it's impossible to get good estimates, a sub-stantial amount of longshore pay never gets away from the docks. The men often have to pay for the privilege of being picked in a shape-up. And since no legitimate bank or loan company would give credit to a man who never knows when he is going to work next, they often have to borrow from loan sharks who operate on the docks at rates that are said to be boundless. It is doubtful whether these loan sharks could operate without the sanction of the hiring boss or some union official.

 Code of Silence—Longshoremen seldom publicly voice their gripes against these practices, partly because they are afraid, but partly because of another waterfront tradition: the code of silence.

#### IV. How Many Men?

As a result of this code, it is almost impossible to get any firm figures on earnings, hours worked, or even number of employees on the docks. ILA claims a total membership of around 60,000, although it appears that local unions pay per capita member taxes to the international on only about 12,-000 members. Some New York figures are collected by the New York Shipping Assn.'s Central Records Bureau, which was set up to collect data on dockworkers eligible for vacations and welfare benefits.

But the practice of using short crews—hiring 18 men to do the work of 20 with the hiring boss pocketing the extra pay—isn't reflected in the figures. Besides, some longshoremen are known to work under more than one name. This way, they can get enough work under one name to quit and collect unemployment compensation while they continue working under the other name.

· Proposals-It has frequently been suggested by outside observers that the best way for the union to clean up its operations is to tighten up membership requirements so that cards are issued only to regular longshoremen. There is probably enough work to provide an adequate income for the group of regulars. And there could be some provision for admitting temporary workers to provide extra hands during peak periods. Some kind of rotation system of the hiring hall type used in the maritime unions has often been recommended. Some ILA locals outside New York have made efforts to "decasualize" hiring. But in the main, ILA hiring is dominated by the shape-up.

#### V. ILA's Turbulent History

About the only major form of grief that ILA doesn't seem to have is communism. The Board of Inquiry gave the New York locals a clean bill of health. It has been said, though, that, unless the Atlantic waterfront is cleaned up, the ILA will be broken and Harry Bridges and the Communists will move into the vacuum.

Until 1937, Harry Bridges' International Longshoremen's and Warehousemen's Union was part of ILA. ILA started in 1892 as the Lumber Handlers of the Great Lakes. (It still has some scattered locals there.) A vear later it expanded to include coast longshoremen and joined the AFL. In 1894 ILA took its present name. In New York, the union ran into trouble from the rival Longshoremen's Union Protective Assn. The two groups fought until 1913, and in 1916 they merged under the name of ILA. In that year, the union struck for and won its first contract with New York port employers. That was the last major strike in the port until 1945. By the end of World War I ILA had organized practically every dockworker in the port.

Meanwhile, it had begun moving into



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Pacific Coast docks, too. It organized San Francisco and other ports and then made an abortive attempt to cut itself into the jurisdiction of the Sailors' Union of the Pacific.

It even changed its name to International Longshoremen, Marine & Transport Workers' Assn. But it got into a fight with SUP, and AFL president Gompers made it go back to its original name and lay off SUP's territory.

· Lost Strike-ILA's West Coast power was broken by a big, unsuccessful strike in 1919. It lost all its Pacific ports except Tacoma. Then in 1933 it began to revive. By 1934 Harry Bridges and a left-wing group began to assume power on most of the West Coast. Bridges' group had a series of fights with ILA's international leaders, and, in 1937, he pulled his locals out and took them into the newly formed CIO.

Since then, ILA hasn't been able to recapture any of its western power, but Bridges hasn't been able to make any headway in the east either. At present, ILA locals are grouped into four districts: Atlantic Coast-Virginia through Canada; Great Lakes; South Atlantic & Gulf Coast-North Carolina to Texas; and Pacific Coast-Alaska, Washington, and British Columbia. But the bulk of its membership and most of its policy decisions come from the Atlantic District. The Atlantic contract sets the pattern for the entire union, and the bulk of Atlantic District power is in the port of New York. It is really New York that makes policy for the entire union membership.

· Negotiations-The contract is negotiated by the district's wage scale conference. Theoretically, delegates to the conference are chosen by vote of the locals. The contract they negotiate is then submitted to the rank and file for a ratifying vote. In the recent Board of Inquiry report, it was said that many delegates were improperly chosen and few members had a chance to consider the contract before they voted on it. And when the ratification vote was checked, many ballot boxes were shown to have been stuffed-though not enough, the board said, to change the results of the election.

The machinery for making decisions democratically, even when it is available, seems not to be used properly by Rvan and local and international officials. Many observers feel that the fault lies with Ryan and the men near him for letting the racketeers and politicians in. Ryan's friends say he is doing the best he can considering outside pressures too big for him to fiight. They point to the fact that he was voted president for life by the ILA convention in 1943 as proof that rankand-file members are satisfied that he is representing their interests adequately.



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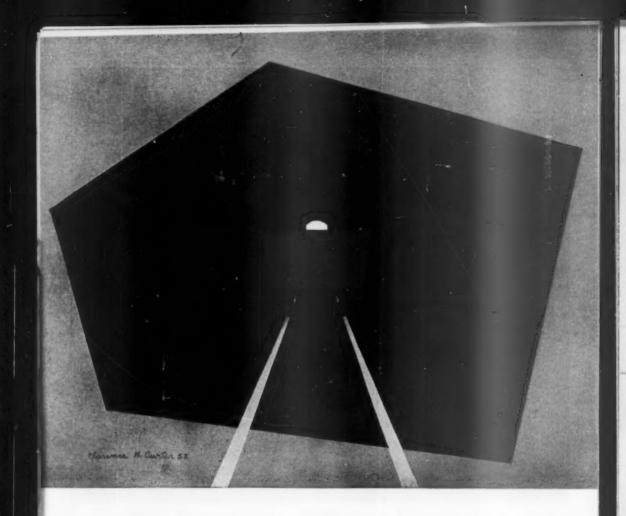
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#### LABOR BRIEFS



UAW commentator Guy Nunn (left) interviewed auto workers serving with the Army in Korea for the union's own radio program, over a Detroit station. His tape recordings of the interviews have boosted interest in the program, which seemed to be losing audience appeal.

A 71¢ raise granted by Weyerhaeuser Timber Co. to International Woodworkers (CIO)—which wanted 20¢—is expected to be the settlement pattern for 50,000 lumbermen in five northwestern states.

A 30-hour week for industry is envisioned—though still far in the future—by John Burke, president of AFL's Pulp, Sulphite & Paper Mill Workers. He told a recent convention that hours already have been cut to 36 a week in several paper mill contracts.

Compulsory arbitration of public utility labor disputes got a third knockout blow in Florida last week. A federal court held a 1947 state law unconstitutional. Wisconsin and Missouri antistrike laws already had been invalidated.

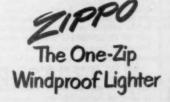
Good friends and allies: That's how Samuel Rubin describes the relationship between the National Assn. of Hosiery Manufacturers—which he heads—and AFL's hosiery workers' union. Rubin told a recent union convention that 80% to 100% unionization of the industry would help by opening a legal avenue to controlled production.

Labor songs—long neglected in American folk music—are beginning to get attention. Labor Arts, a Detroit record company, reports "Songs for Sectarians" running into a second edition, and a new album, "Songs of the Wobblies," coming out soon.



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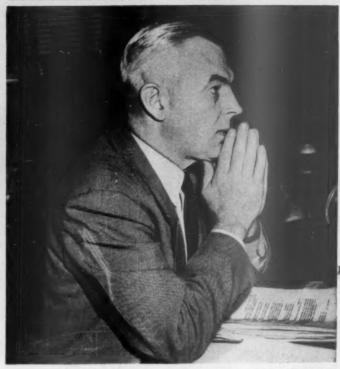
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· Money Man-McNeil, a Republican, has been with the Dept. of Defense ever since it came into being-the only man to survive four defense secretaries. His present job, created in 1949, is Assistant Secretary of Defense in charge of the budget (in effect, comptroller). As such, McNeil is the man responsible for administering the money appropriated to his department. The 1953 defense budget now before Congress (about \$52-billion) will bring the total amount that McNeil must administer for the three fiscal years from July, 1950 (the beginning of the Korean War), to June 30, 1953, to about \$176-billion.

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Tournaskidder speeds your entire woods operation. It can leave instantly for a routine or emergency task miles away without delay for trailer transportation. Big 21.00 x 25 rubber tires permit travel anywhere via narrow skidways, rail right-of-way, paved roads, etc., without damage to surface traveled.

The electric winch is another time saver and may be operated while unit is in motion. This is a big advantage over conventional tractors which must stop, disengage clutch, operate winch, then reshift for travel. On tough pulls, once you're on the move, there's no slowdown. Constant-mesh transmission changes gear ratio without loss of vital momentum. Torque converter is available for a plus in smooth steady power at any speed. Exclusive fingertip electric controls operate shifting, steering, dozer and winch. This contributes to faster, easier machine operation.

If you are interested in logging, investigate this versatile woods handyman. Your LeTourneau Distributor will be happy to give you full details. Or, if you have earthmoving problems, ask him to tell you about the line of Le-Tourneau rubber-tired scrapers, dozers and haul units that are reducing costs of moving earth all over the world.



"... the Dept. of Defense has made basic changes in its bookkeeping ..."

NAMES AND FACES starts on p. 74

up the budget it thinks it needs, submits it to McNeil. Generally, it's much too high, so McNeil must whittle it down to fit. Then he must make sure that the money flows out in steady, regulated amounts, not in spurts that would disrupt the civilian economy.

• Bookkeeping Changes—That in itself, of course, doesn't save money, or even keep track of it in detailed fashion. And under the government's usual fiscal procedures, you can't keep detailed track of it. As a result, the Dept. of Defense has been making some basic changes in its bookkeeping system that someday may work their way into other federal departments.

Under the old "horizontal" system, almost every bureau within the Defense Dept. shared the cost of any given item. For example: Appropriations for maintenance at a naval air station—like repair of hangars or a new fence—would be made to the Bureau of Yards & Docks. The bureau would get similar appropriations for other facilities—ordnance depots, navy yards, submarine bases. It was a perfect setup for buck-passing: The man responsible for running an individual base couldn't testify as to its cost because he wasn't responsible for the money.

• Responsibility—McNeil is changing all that. Now the navy air bases are under the management of the Bureau of Aeronautics. That bureau now gets the direct appropriation, and the chief of the bureau is directly responsible for it. When he wants repairs for a station, he orders them from the Bureau of Yards & Docks, pays that bureau for them out of his housekeeping appropriations. Since he has to account for where the money goes, he's more likely to keep an eye peeled to see that it isn't spent unnecessarily.
• Idea's Origin—McNeil himself takes

• Idea's Origin—McNeil himself takes no credit for bringing about this trend toward a more businesslike operation of the Defense Dept.: "No one individual is responsible. It is working out only because a lot of people here have really tried to get together and work as a team." This statement is not due to modesty so much as it is to fact. The idea didn't originate with McNeil—at least in essence—but with the late James Forrestal, first Secretary of Defense.

Toward the end of World War II Forrestal began thinking about a postwar Navy. Up to then, he had been able to control things by controlling



Sinclair reports
a Record Year
of Accomplishment

In 1951 Sinclair topped its previous records in earnings, sales and production, and completed the second year of its expansion program. Here are salient facts from our 1951 Annual Report:

\$6.78 per share—exceeded those of any previous year and were 16.7 per cent over 1950.

of 135.4 million barrels of refined products were highest in the Company's history—16 per cent above 1950 volume.

marked the completion of the second year of the Company's Production Expansion Program with increases in production well ahead of schedule. During this two-year period daily average net domestic crude oil production increased approximately 26,000 barrels, or 33 per cent.

domestic refineries processed 129,759,265 barrels of crude—17 per cent more than 1950 and approximately 36.4 per cent more than 1949.

delivered 127,925,681 barrels of crude or an increase of 30 per cent and 38,881,812 barrels of refined products or 11 per cent more than last year.

a new pipeline from Oklahoma to East Chicago, Ind. was started . . . Volume transported by Company owned or chartered tankship was up 20 per cent . . . Almost 2,000 new dealer accounts were acquired . . . New refining facilities authorized at Houston will double the plant's capacity for defense products now in short supply.

#### STATEMENT OF CONSOLIDATED INCOME

	1951	1950
Gross Operating Income Costs and Expenses	\$808,982,202 690,943,322	\$678,877,156 581,460,342
Operating Income	\$118,038,880	\$ 97,416,814
Other Income	7,193,076	7,057,194
Other Deductions	6,083,466	5,180,862
Provision for Federal Income	\$119,148,490	\$ 99,293,146
and Excess Profits Taxes	37,250,000	29,100,000
Net Income	\$ 81,898,490	\$ 70,193,146



### CORPORATION

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### Here's HOW the Grinding Department figures it...



That 'formula' sure paid off in one grinding department. What does it mean? Simply this: a Simonds Abrasive Company grinding wheel — specification C16-S7-B1 — boosted production 25%. Why? Because this wheel is accurately specified for the job it had to do. This is true of all Simonds wheel specifications, whether standard or for wheels specially made for out-of-the-ordinary jobs. Put your wheel problems up to a Simonds engineer. No obligation. Write,

EXECUTIVES — Simonds Abrasive Company's complete line has everything you need . . . grinding wheels, mounted wheels and points, segments and abrasive grain.

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Division of Simonds Saw and Steel Co., Fitchburg, Mass. Other Simonds Companies: Simonds Steel Mills, Lock-pert, N. Y., Simonds Canada Saw Co., Ltd., Montreal, Que. and Simonds Canada Abrasive Co., Ltd., Arvida, Que.

### "... The big thing for Navy control in peacetime would be money . . ."

NAMES AND FACES starts on p. 74

raw materials and the legal staff. But in peace, he would no longer be able to control raw materials. The only substitute, he figured, would be to keep a really close grip on use of funds within the Navy Dept. The big thing for Navy control in peacetime would be money.

• First Contact—Forrestal knew that McNeil was just the man to do that job for him. Wilfred McNeil, then a commander in the Navy Supply Corps, had first come to Forrestal's attention in 1942. A friend of both Forrestal and McNeil last week recalled the incident: "Forrestal noticed McNeil because he wasn't the kind of naval officer who insisted on doing everything himself."

Forrestal at that time was having trouble with a budget officer who did try to do everything himself (including going over Forrestal's head directly to Congressional committees). He made McNeil a special assistant.

• New System—As peace drew nearer, Forrestal and McNeil (by then a rear admiral) worked out a new budget and finance system that cut across the old Navy bureau system. McNeil headed this system—first in the Navy, then for all three services, when Forrestal took him along to the newly created office of Secretary of Defense.

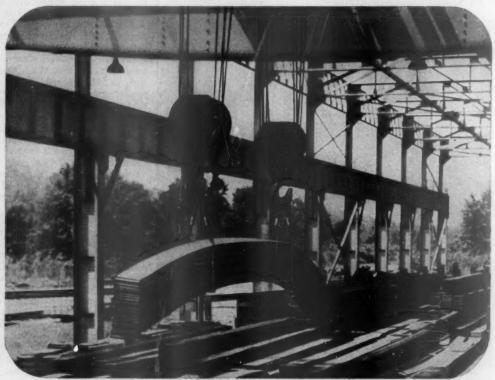
McNeil did the job so well that by 1948 he was recognized as an authority on government financial matters. One result: McNeil had a strong hand in drafting the legislation that created the Hoover Commission.

• Man of Distinction—McNeil's reputation in Washington has been built right in Washington. Outside what he has done in his government jobs, the only spectacular thing about him is his appearance. He looks like a Warner Brothers version of the typical businessman; his white hair and slender build give him a Man of Distinction air. Yet he has none of the stiffness that often goes with that air. He has a ready smile, a warm personality, a casual manner. When he talks to visitors in his big Pentagon office, he likes to sit with his feet on the edge of his desk, soles of his shoes together, knees apart.

• No Horatio Alger—There's little of the Horatio Alger in McNeil's career up to now, at least, he's shown little urge to be a big shot. Born in Boone, Iowa, in 1901, he is the son of a locomotive engineer on the Northwestern

At the age of 17, during World War

## WIRE ROPE



In industrial plants everywhere, Roebling wire rope assures fewer shut-downs... Roebling slings help cut materials handling costs.

### This is the longest-lasting rope we've ever made for industrial use

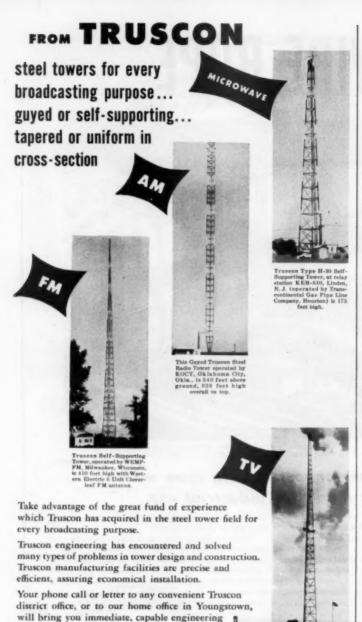
ROEBLING has been making wire rope for more than a hundred years. During that time we've been developing new kinds of wire and wire rope, and making them constantly better.

Probably the first thing asked about wire rope is, "Has it got what it takes? Will it stand up on the job and reduce replacements?"

Our answer is an emphatic yes, because Roebling Preformed "Blue Center" Steel Wire Rope passes the severest tests for tensile strength, abrasion resistance and all 'round toughness.

There's a Roebling wire rope of the right construction for every sort of service. The Roebling Field Man in your area will recommend the most efficient and economical rope for your requirement. His suggestions on the proper installation and maintenance of wire rope will bring further savings. John A. Roebling's Sons Company, Trenton 2, New Jersey.





I, young Wilfred enlisted in the Navy. Upon his discharge in 1919, he worked for two years in the Naval disbursing office. (He never did get to college.) In 1921 he went back to Searsboro, lowa, worked in the local bank for a few years, then bought a bank of his own in Brandon, Colo. He sold out in 1928, went back to Ames, Iowa, where he had a Nash automobile dealership for three years. From 1931 to 1933 he was agency manager for the Des Moines Register & Tribune circulation department in Fort Dodge, Iowa. Then he spent the next seven years doing the same job for the Washington Post, first in Hagerstown, Md., then in Washington. And in 1941 he went back into the Navy as disbursing officer.

• Anonymity—It fits with this un-

an almost fanatical passion for anonymity. "I get more done around this town if nobody knows me." he says. "You're not a target then. But as soon as you start going to a lot of cocktail parties, everybody decides you're running for something."

But anonymity alone keeps no man wholly popular, and McNeil is no exception. He has enemies who charge that he uses his anonymity simply as a means of protecting himself against flying glass when things get hot.

flying glass when things get hot.

"No" Man—What has created the enemies, however, is not McNeil's anonymity, but the fact that, like most budget directors, he prides himself on being a "no" man. McNeil once said that he is the only man in the Dept. of Defense who can say no to the brass and make it stick. That has got him in hot water with a lot of people, particularly the Air Force. In 1948 and 1949, when military appropriations were small, he spent most of his time saying no to the Air Force.

One result is that he and W. Stuart Symington, former Air Force secretary, built up a solid feud. McNeil is said to have told one committee that Symington hastened Forrestal's suicide by constant harassment, Symington has charged that McNeil favors the Navy over the other services.

• Savings—But by and large, McNeil gets into few scrapes. And the figures in financial savings his department has made are on his side. Example: A year ago the government had an average of 43 ships a day lying at anchor in the U.S. "Now," says McNeil, "we have none. At \$6,000 a day demurrage, that's quite a saving."

But McNeil says that the Dept. of Defense has a long, long way to go. "If we can ever get the money straightened out," he says, "we can straighten out the whole Defense Dept. In fact, the core to the solution of the whole federal mess is proper financial con-

trol"

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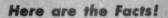
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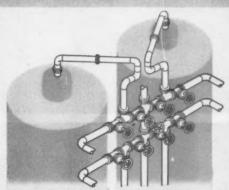
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Here's a case that convincingly demonstrates the
extra dependability of Crane valves. This plant
had constant troub's with valve leakage until
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why it pays to insist on Crane Quality—for greater
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Where Installed: In oil refinery, on a 9-valre process control manifold. Flaids Handled: Straight run gasoline, air-steam mixtures, and corrosive waste gases, all at extremely high temperatures.

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Solution and Result: Troublesome valves replaced with 9 Crane Alloy Steel Wedge Gate Valves. Now in service more than 2 years. No trouble; no repairs needed. All valves operating like new.

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### PROMOTION





LIQUOR FLOWS LIKE WATER from four-spigot dispenser—one of Hayes' gimmicks to keep ink flowing from thirsty clients' pens to dotted line on order contracts.

In designing **EOG** (Executive Office Group)
George Nelson gave particular thought to today's trend toward business interfors that are livable as well as efficient. The deak, storage and searing components in **EOG** together make possible an executive office where more work can be done under less tension with fewer distroction. Write Dept. BW-4 for free illustrated brochure.

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Builder Hal B. Hayes (standing) is ...

### Running a Private Nitery

West Coast builder, Hal B. Hayes, has solved a lot of problems—from building concrete houses to launching a streamlined concrete ship. But one problem was always with him: the high cost of entertaining a client or supplier to close a big deal. Now he thinks he has cured that, too, by setting up his own night club in Los Angeles.

 All the Glamor—When Haves totted up his 1950 dining and drinking bill, he discovered he had poured somewhere around \$70,000 into Hollywood's bistros. He figures that with his own night club he will save a lot of this in the long run—even figuring in the \$4,800 annual rental for the apartment he leased overlooking Los Angeles' famous Sunset Strip, a warehouse-full of liquor he bought, and other nitery necessaries.

Chez Hayes, as he calls his lair, has all the glamor of any night spot on the Strip. Trees and shrubs are everywhere in the several small rooms. Rugs run all the way up the walls, and the TV set is housed in a tree trunk. In one room, which serves as a dance floor,

# take your leisure Veica\*



JOHN STEINWAY, busy executive of piano-famous Steinnery & Sons, finds a relaxing note in his hebby of photography. His enthusiasm for the Leica is shared by many other business leaders of today, including 3 other members of the Steinnery family.

When you're keyed up from business pressure, helpful, healthful relaxation is easier to come by with a rewarding pastime such as Leica photography. It's simple to learn... to enjoy any time or place... satisfying to beginner or expert. For your light, compact, precision-perfect Leica operates with almost automatic case. Yet it offers you the fullest range of picture-making possibilities... the finest quality of results. Look into a Leica and relax, at leisure, with the camera most people want the most.



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ALBION MALLEABLE IRON CO. cuts cold-shearing costs with

### FARQUHAR Hydraulic Press

The Albion Malleable Iron Company produces automotive castings at its Albion, Michigan plant. Cold-shearing the gates from the castings in this modern plant requires dependable, trouble-free equipment, and for this equipment Albion turned to Farquhar engineers. After studying the problem, Farquhar recommended a 200-ton self-aligned, gap-type Farquhar Hydraulic Press. This press not only proved completely satisfactory in operation, but was also able to effect substantial economies because it was designed specifically for the job in hand.

#### Farquhar Presses Cut Your Costs

Just one more example of cost-cutting Farquhar performance in heavy production. Farquhar Presses are built for the job... assure faster production due to rapid advance and return of the ram... greater accuracy because of the extra guides on moving platen... easy, smooth operation with finger-tip controls... longer life due to positive control of speed and pressure on the die... long, dependable service with minimum maintenance cost!

Farquhar engineers are ready to help solve whatever production problem you may have. Give them a call.

Send for Free Catalog showing Farquhar Hydraulic Presses in all sizes and capacities for all types of industry. Write to: A. B. FARQUHAR CO., Hydraulic Press Division, 1501 Duke St., York, Pa.

is an aquarium, complete with waterfall. There is even a large glass-enclosed garden in the powder room.

In the taproom, bottles fill every available inch of the shelves built around all four sides. No matter how large the party, no client need go thirsty: Four spigots pour bourbon, Scotch, beer, even champagne.

• Near-Hit—Although Haves has gone about his night club venture with all the aplomb of a professional, his real specialty lies far afield. Since he was 17, 41-year-old Hayes has been a specialist in concrete construction. His experiments with different concretes and aggregates and special pouring forms, prefabrication, and so on, have carned him considerable publicity. In 1941 he put on a show for the Navy and defense experts, pouring a house in 35 min. and erecting it in 28 min. (BW—Mar.1'41,p18). The concrete, made with volcanic aggregate, was about 40% lighter than the standard mixes.

At that time everybody thought the "fliver house," as it was called, was going to be the cheap postwar home for the wage earner. But it was soon overshadowed by the mass-housing program fed by cheap financing. It was prutty hard to build up glamor for concrete when wooden homes could be bought with no money down.

• A Different Tack—Hayes' disappointment in the collapse of his flivver house was short-lived. He was soon up to his neck in another enterprise—his streamlined cement ship, the Lektron, which he launched in 1945. It was a 125-ft. model of a ship whose virtues were low cost and stability against rough waters and torpedoes. But again destiny ruled. The war ended, and the ship market died.

• Second Try—Also in 1945 Hayes put on his second speedy construction act to publicize his lightweight concrete, now called Plastic Air. This time he put up a house complete with landscaping in 34 min. National magazines blew the trumpet for his fireproof, waterproof, earthquakeproof, and hurricaneproof concrete that could be sawed or nailed.

Lately, Hayes has blossomed out as sponsor-builder in the military construction program, handling about \$14-milion in contracts. In 1951 he put up 1,050 concrete homes at California's Edwards Air Force Base, and another 712 at the Naval Ordnance Testing Station at Inyo-Kem, Calif.

• Just in Case—Hayes' latest push for his lightweight concrete house is an offer to the Atomic Energy Commission to build an atom-bomb-proof house on the Nevada proving grounds. The walls will have to be made extra thick, but Hayes thinks he can hold costs down by spooning in volcanic ash, or even ordinary earth, with his special chemicals and cement.

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HYDRAULIC PRESSES

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### Brake Lining Made by R/M Provides Fine Safety Lesson

Today's tough traffic conditions make it almost imperative for anyone-young or old-to understand why "any old brake lining" just isn't good enough. Get a mechanic to remove a wheel from your car. It only takes a minute. Have him show you the vital part brake lining plays. Ask him to explain why brake lining branded with one of the trade-marks of this corporation can always be counted on for faster, safer stops and longer, more economical wear.

Raybestos-Manhattan is the world's leading supplier of stop-and-go products for original equipment

and replacement. More cars, trucks and buses use R/M brake linings, clutch facings, and automatic transmission friction material parts than any other make. R/M is looked to also for its top-quality fan belts, radiator hose, and other automotive rubber products. This automotive production, though, is just one example of R/M versatility. Almost every industry, indeed almost every individual, is served by something R/M makes in its six great plants and laboratories. If you have a rubber or asbestos problem, call on an R/M representative to help you. Raybestos-Manhattan, Inc., Passaic, New Jersey.

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### New Idea ...

### in OFFICE PARTITIONS

Translucent Glass Jalousies\*
Divide An Office Without
Disjointing Its Organization

Venetian window partitions or jalousies of translucent glass by Mississippi are fast replacing solid separations that cut off light, ventilation and communication from adjoining areas...help integrate the entire organization and permit more accurate control of temperatures for heating and air conditioning.

The new adjustable dividers give each office better control of illumination and air movement. Opened or closed, the translucent glass floods interiors with softened "borrowed light" that creates a friendly feeling of spaciousness and comfort.

Opened windows permit the executive an unrestricted view of his entire force. Yet, he can have complete privacy when desired with an easy turn of the cronk. And the closed vanes reduce office clatter to a minimum.

When designing or ramodeling your offices instruct your architect or contractor to install "venetian window" office partitions, Specify translocent gless by Missispia, available in a wide variety of patterns wherever quality glass is sold.

Send today for free booklet, "Figured Glass By Mississippi." Contains many ideas for commercial applications of this versatile, modern material.



\*Mississippi Glass Co. does not construct or install jalousies. For estimates and other information, see your local supplier.

Glass COMPANY

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CABOOSE TO ENGINE shows TV viewers the radio network in operation on Eric R.R. between trainman and engineer. It's another example of American efficiency.

### NAM Scores a Hit on TV



SECURITY FOR PURITY is the pictorial story of Sealright Corp., Fulton, N. Y., which manufactures thousands of tons of milk containers and ice cream cups.



CAREER IN CHEMICALS follows a new employee through Ansul Chemical Co., where he sees how dry chemical fire extinguishers are made and tested on fire test field.

### **Soft-Pedaling Commercials**

About a year and a half ago, the National Assn. of Manufacturers put some money into a new public relations' venture. It launched a series of weekly television shorts called "Industry on Parade," which it offered to TV stations free of charge.

 Successful—Today, 79 telecasts later, NAM has decided the venture is successful.

Of the 63 television market areas that received the sample reel, 46 stations immediately accepted the series for regular showing, nine came in later. This week Oklahoma City reported that NAM's television series ranks among the first five programs in popularity in that city; Milwaukee gives Industry on Parade a higher audience rating than Meet the Press, telecast in the same Sunday afternoon time segment. Reports of other audience measurements show that the series ranks well up in viewer program preference—in many cases holding its own against strong competition by ex-

pensively budgeted television shows. · No Propaganda-The idea behind the series is somewhat of a departure. NAM's usual public relations program leaves no doubt as to the association's position on business, economics, and social problems; these films simply depict American industry, business ingenuity, and enterprise. Although two 40-second segments within the program are called "A Message from Industry to You," this material is entirely free of NAM argument. It calls attention to the superiority of the U.S. economic system, the dangers of inflation, the benefits of research, the need for employment of the physically handicapped, the importance of voting, and the conservation of our material resources.

• Like a Newsreel-Each reel contains four or five stories-each two to four minutes long-with an over-all timing of 13 min. and 20 sec. Format and story treatment resemble an orthodox newsreel, but the material is not dated, and

### In <u>your</u> hands this can mean new sales!



### New, controlled "plastic putty" with a whole list of advantages!

THIS new American Anode material—Ameran CV-G (controlled viscosity gel)—can open up new sales fields for you. It can help you develop new products, or improve present ones or methods.

Putty-like in form, it is a controlled viscosity "gel" that can be hand-molded like modeling clay. No warm-up or heating is required. Articles are fused after removal from the mold—leaving the mold ready for immediate re-use.

Check these additional advantages: Besides cold dipping and molding, Ameran CV-G can be cast, extruded or spread. It resists oils, greases, most acids and chemicals. Its viscosity is controlled—does not change in storage. No solvents are needed, eliminating fire hazard. It can be compounded in a wide range of colors, including white.

You'll think of many sales-making uses for Ameran CV-G. We'll be glad to help you with technical advice—samples if desired. Write Dept. AF-4, American Anode, 60 Cherry Street, Akron, Ohio.

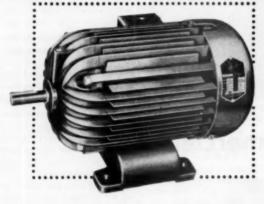
A Division of The B. F. Goodrich Company

### What can AMERICAN ANODE do for you?

CRUDE AND AMERICAN RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS, AMERAN RESIN PASTES, COMPLETE MANUFACTURING FACILITIES

# New Hoover. Motors Tools Too

# totally enclosed



If you make a motor-driven product that must work where there's moisture, heavy dust, wood chips, or metal shavings—these new, totally enclosed Hoover Motors are for you.

And you are getting more for your money than with any comparable motor on the market,

There are both *self-cooled* and *fan-cooled* models—newly designed to keep trouble out and performance high. No openings to let moisture in. No blind passages to catch dust and dirt.

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Polyphase motors through 5 H. P. Capacitor start motors through 3 H. P. All built in NEMA frames. Extremely compact. More horsepower for each pound of motor—more motor for your money in every way.

Made and guaranteed by the makers of the famous Hoover Cleaners, who have been building precision motors since 1934. World-wide service facilities—always ready to protect your good name.

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Please send co plete line of Hoo	italog showing and describing com ver Maters.
Name	
Address	
Chu	Zone State



INTERNATIONAL driving school, founded by Willys-Overland Co., trains United Nations' transportation supervisors.

there is a pictorial and editorial pattern that distinguishes it from any other newsreel or TV program.

• Coverage—How things are made is the basic theme of Industry on Parade. Each reel includes at least one story taking the viewer through America's industrial plant gates and behind the scenes in the development and manufacture of products he sees and uses every day. The shorts cover a variety of subjects such as: War on Whiskers (inside the Gillette Safety Razor Co.); Seaman's Sixth Sense (how radar works); Baseball Star at Work (how one of the Yanks kills time between baseball seasons); and Industry's Wonder Child (television, of course).

The idea for the series was conceived by NAM's Radio & Television Director, G. W. Johnstone. Arrangements were made with Frank McCall, Director of NBC-TV News, to handle filming and production of the series. A. Maxwell Hage edits the telecast.

The entire cost of making and distributing the films is borne by NAM, which supplies the films to the stations. Even if the station sells the package to a local advertiser, NAM gets no kickback. And a local advertiser can cut NAM's commercial and substitute his own.

• Sent to Schools—After the station telecasts the reel, it can turn the film over to the local school—free of charge—or distribute it to other interested community groups. At present 24 metropolitan school systems are showing the films.

NAM has no trouble getting companies to participate in the scries. In fact, many of them write in with suggestions. The association is keeping its fingers crossed. Like all trade groups, it's afraid that some members might complain if others got publicity while they didn't. But so far NAM has had no squawks from competitors of companies that were featured in shorts in the series.



### A thousand times, No!

BE IT BOLL WEEVIL OR grass-hopper, thrips, wireworm or plant bug, the insect pest that touches Aldrin will do well to write its will. This insecticide is toxic in unbelievably small doses.

For instance, just one ounce of Aldrin will control thrips on an acre of cotton! Two ounces will control grasshoppers on an acre of food crops. And a pound will massacre boll weevils on four acres of cotton.

Because Aldrin compounds are easily sprayed from the ground or from planes, quick and effective coverage of large or small areas is easily attained. And Aldrin kills in three ways: by contact with the pest,

when eaten by it, or when inhaled,

Bringing Aldrin to the farm is another example of Shell Chemical's partnership with industry and agriculture. Application of petroleum chemistry to your needs is our constant purpose.

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Chemical Partner of Industry and Agriculture



### Famous MARCHANT Firsts



Marchant ploneers the manufacture of rotary calculators in America.

Marchant, at the Panama Pacific International Exposition, receives a special award for the world's first electrically-powered calculator.





Marchant introduces the first commercially successful automatic multiplication.

Marchant develops the "SILENT SPEED" model utilizing a new and exclusive principle of continuously-flowing, proportional gars instead of the traditional "stop and start," thereby stepping-up the operating speed from 340 to 1300 dial counts a minute.





For heavy and diversified figure work, we will prove by a demonstration that a Figuremaster is the least expensive calculator to own and to operate. Where the work is lighter, the low-cost figurematic is recommended—both models have our exclusive push-button multiplication ...merely enter multiplicand in keyboard, and answer appears simultaneously as multiplier is entered in Automatic Multiplier row. Since more than half of all figure work is multiplication, experienced operators everywhere demand the calculator that automatically multiplies

MARCHANT CALCULATORS

### Save Time and Money with he World's Fastest Calculator

proved *Figuremaster* controls r split-second operation

> vision Control automatically -up dividend and divisor as utomatic division starts.

nstant negative Multiplier rol eliminates need to re-set makes negative as simple as positive multiplication.

FASTEST Marchant's mechanism operates at speeds ranging up to twice those of any other calculator.

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SUREST Marchant is the only American calculator with dials for verifying the keyboard entry.

EASIEST Marchant saves the operator at least one step in every multiplication problam.

**NEW Key-Lock Control retains con**stants, locks any or all columns-Unlock Control clears instantly.

Call the local Marchant Man in your phone book for a demonstration or mail the coupon.

Mail this Coupon with your business letterhead to get our free CHIDE TO MODERN FIGURING METHODS

ILLUSTRATED BOOKLET ABOUT MARCHANT CALCULATORS

MARCHANT CALCULATING MACHINE COMPANY



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From oxygen for incubators to oxyacetylene flame cutting...from gases for beverage carbonation to sign lighting...from steel making to synthetics, you'll find Air Reduction products contributing to the comfort and convenience of daily life.

Results of continuous research and development, these products are but small parts of Air Reduction's family of materials and processes aimed at filling tomorrow's needs and the requirements of today.

In fact, wherever progress is racing ahead to new frontiers, you'll find an Air Reduction Product.



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REDUCTION PACIFIC COMPANY, AIR REDUCTION MAGNOLIA COMPANY...Indusrial Gases, Welding and Cutting Equipment

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AIR REDUCTION CHEMICAL COMPANY

### Kents Go Over

Lorillard's new filter-tips are showing how cigarette companies can profit from the anti-nicotine trend.

The last few years have seen the beginnings of what seems to be a nation-wide revolt against cigarettes. There has been a rash of books and magazine articles on how to stop smoking. A drug advertised on radio today claims to kill the habit outright. Cigarette companies, instead of knuckling under to this revolt, have been riding along right on top of it—merely by putting filters on their cigarettes and changing the pitch of their promotion.

Latest comer to the filter-tip crowd

Latest comer to the filter-tip crowd has been P. Lorillard Co.'s Kent brand, which was introduced about four weeks ago (BW-Mar.22'52,p27). Kent is proving just how well anti-nicotine promotion can go over. Its first weeks of sales have exceeded Lorillard's "inost

sanguine expectations."

• Hot Item—Lorillard says the special Kent filter takes out seven times more tar and nicotine than any other filter on the market. Apparently, this was just the pitch smokers were waiting for. Kent's initial success was "without precedent in the cigarette industry." Primed by wait-till-you-try-it advertising, customers flocked to cigar stores on the first day Kent was introduced. Dealers in New York, Chicago, Los Angeles were placing repeat orders that same day.

The cigarette industry is possibly one of the most fiercely competitive in the country, and manufacturers guard production and sales figures as jealously as the U.S. guards its A-bombs. Nevertheless, Lorillard's executive vice-president, Robert M. Ganger, gives one indication of Kent's success: Lorillard had originally planned to double its initial production six months after Kent was introduced. Now, the company expects to do so within the next three

weeks.

• Greedy Market—About the biggest problem Lorillard has, according to another company spokesman, is keeping the dealers supplied. Lorillard's cigarette plants are in Jersey City, N. J., and Louisville, Ky., while for some reason the company has not yet figured out, biggest demand for Kents has been on the West Coast. This has led to some frenzied juggling of shipments. Last Tuesday, for instance, one area of the West Coast suddenly ran out of stock, and Lorillard had to call on air express to get a new batch of Kents out there on time.



Just recently opened to traffic is the New Jersey Turnpike—probably the world's finest piece of highway engineering. The Turnpike was built by private capital in the remarkably short time of 24 months at a cost of \$225,000,000.

... Crossing the state from George Washington Bridge to the Delaware Memorial Bridge at Deepwater, it permits direct non-stop 60-mile-an-hour traffic. Ultimately it willconnect with the Pennsylvania Turnpike and the to-be-built Maryland Express Highway to give fast trucking between New Jersey and Pittsburgh, Baltimore and Washington.

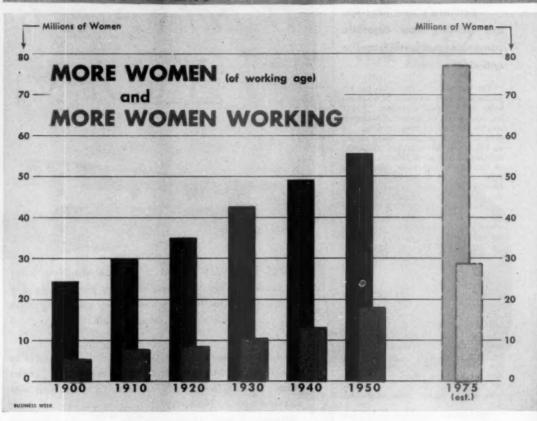
... This Turnpike is an important addition to New Jersey's magnificent highway system which consists of more than 1700 miles of paved state highways and some 6000 miles of hard-surfaced county roads.

... Industry finds this highway system of great value in efficient distribution of products to the vast over-night trucking market contiguous to New Jersey.

Write for your copy of the new digest about New Jersey—"An Industrialist's View of the Crossroads of the East"—Box B, Public Service Electric and Gas Company, 72 Park Place, Newark, New Jersey.



### MANPOW



### Question for Employers: Where Are They



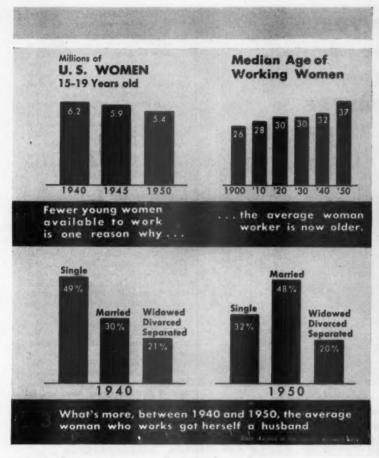
only job a woman could get, until . . . the turn of the century. Then . . .



DOMESTIC work was once about the CLERICAL jobs began to open up around INDUSTRY, sparked by World War II,



put women in jobs traditionally men's.



### Hiding-and Why?

Spring, as everyone knows, is the season when young men feel a hint of cherchez la femme in the air. This year most of industry is out to snag some women, too.

In almost every business in the country, a hunt is on for more female office workers. Employers are worried—and puzzled—by the growing difficulty of getting enough secretaries, stenographers, and typists.

This, along with the publicized shortage of teachers and nurses, makes many people wonder: Where are the women?

• Quandary—Some people assume there just aren't enough women workers to fill all the jobs. Others figure that we are seeing a repetition of the World War II situation, when scores of women left the traditional fields to take defense jobs. The trouble with these explanations is that they don't jibe with the facts: (1) There are almost as many

working today-about 19-million-as at the peak of World War II; (2) comparatively few plants today are hiring women to do jobs usually handled by men; (3) according to the Women's Bureau of the Dept. of Labor, there's no over-all scarcity of women workers.

Then why the acute spot shortages? The reasons lie deeper than any current wrinkles. The situation is a symptom of some startling and significant developments that have been creeping up on us for years. In a generation, these changing currents have turned the entire womanpower picture upside down:

tire womanpower picture upside down:

• There are fewer young women working today than in the past.

Older women are joining the working force in growing numbers.

working force in growing numbers.

• For the first time, there are more married women than single girls working—by a big margin.

· Many of the working house-



HOW to label... Pressure-sensitive Av Kum-Kleen Labels are quickly and ea applied—Laid on with a finger-tip touch they're self-adhesive and stick to any cle smooth surface without moistening, soak or heating...will not pop, peel or curl. Av designs and prints Kum-Kleen Labels to a size, shape and color desired.

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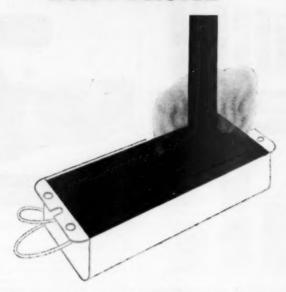
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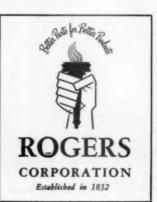


DUROID 705 is typical of the special materials developed by Rogers to solve problems obstructing product improvement. In this instance, our non-blistering material provides an improved type of fibrous insulating barrier for hermetically sealed electrical and electronic components.

You probably don't need DUROID 705, but you can apply the principle behind its development: Rogers' ability to develop, produce and fabricate special materials to improve existing products or to make new products possible. Tell us your requirements, no matter how unusual.



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wives have children under eighteen.

• Changing Picture—Out of these trends, a new pattern is emerging. It is nothing short of a basic change in our way of living. Today we have a more mature female working force than ever before. It is made up largely of women who have taken on a dual set of responsibilities. For all its farreaching effects, this change has for the most part gone unnoticed and is yet to be fully recognized and accepted by U. S. customs and traditions. While many employers go on thinking and acting in terms of 1930, new problems are piling up that make the need for readjustments increasingly urgent.

#### I. Supply and Demand

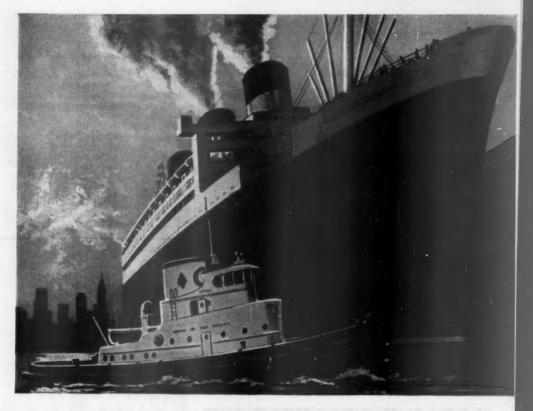
So far, the defense program has not called for a World War II-type mobilization of women. Most plants avoid hiring women for men's jobs as long as there are men available. But where industry has beckoned Rosie the riveter back, plenty of Rosies have been found waiting eagerly at the gate. You'll find some of them back in the production line again at aircraft centers such as San Diego and Wichita, Kan., and in a couple more labor-short areas.

• Shortage—In sharp contrast is the alarming picture you get in the skilled, women-dominated fields. To meet the elementary school demand for over 70,000 new teachers in the 1951-52 term, colleges prepared only 46,000. In the case of graduate nurses, there are an estimated 325,000, against a need for roughly 497,000. And there's such a clamor for stenos that the government has sent an S.O. S. to women's organizations in four cities to help step up recruitment activities. With jobs so plentiful, young stenographers are getting more choosy every day. Wages and hours are old hat. "I want a room with a view," as one put it, "and a man in it who's young and single."

#### II. The Role of Vital Statistics

One key to the situation in the traditional women's jobs is buried in the nation's vital statistics. Fields such as teaching, nursing, and clerical work, particularly since they require a period of training, depend heavily on the annual crop of high school graduates. But with the low birth rates of the depression years catching up with us (BW-Dec.8'51,p146), there's a smaller proportion of young people in the U.S. than ever before: about 25,000 less in the 20-24 year bracket than in 1940, and nearly 2-million fewer teenagers. That means the batch of young workers will continue to decrease in the near future, with no real pickup until 1958.

 Marriages-Not only are there fewer Misses, but what few there are have



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Vital to every Diesel engine is its fuel injection system. And American Bosch fuel injection pumps and nozzles are the choice of most Diesel engine manufacturers. Of far finer workmanship than the costliest watch, these fuel injection systems pre-

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The American Bosch reputation for pioneering design, precision manufacture and thoroughgoing service is firmly established. Constant research and development in the automotive, aviation and Diesel fields assure a future of even greater progress. American Bosch Corporation, Springfield 7, Mass.











Eager beaver!

Drop a letter on the broad tray of this Pitney-Bowes Mailing Scale . . . and the precision indicator with the hairline edge shows instantly the exact weight—without wavering! The automatic pendulum mechanism acts fast, stays accurate. Wide graduations on the chart are easy to read, without bending or squinting . . . Speeds mailing, saves time and temper in any office—and saves postage! . . . There's a 70 lb model for parcel post . . . Call the nearest PB office, or write for illustrated booklet.

FREE: Handy wall chart of new Postal Rates for all classes of mail, complete with changes, and parcel post map showing zones for any locality.



PITNEY-BOWES

Mailing Scales

PITNEY-BOWES, INC.

PITNEY-BOWES, INC. 1427 Pacific St., Stamford, Conn.

Originators of the postage meter ... Offices in 93 cities

proved more successful at husbandcatching. The spurting marriage rate after the war has done a lot to thin the labor-market ranks. Moreover, in each year since 1940, brides have been getting younger.

Considering the number of marriages, it's no surprise that in 1951 the number of babies reached an all-time U.S. high.

Considering the number of marriages, it's no surprise that in 1951 the number of babies reached an all-time U. S. high. Of the 34-million women (exclusive of students) who were not in the labor force as of January, 1951, nearly a third were home changing diapers.

 Bargaining Position—Along with the drop in the number of available girls, the hard-hit fields are up against some long-standing bugbears. Visions of the low-paid teacher or the overworked student nurse are enough to deter girls when it's easy to get other jobs.

Some observers think the office worker pinch may be partly a subjective matter. To many employers, shortage means it's tough to find a secretary who's young, pretty, and competent. Regardless of the fact that they are scraping the bottom of the barrel, too many of these employers still want the cream of the crop.

#### III. The Change in Type

The situation shows that most people have failed to notice the gradual transformation of the female labor phalanx in the past couple of decades. The fact is that today's breadwinner is likely to be (1) older than she was a generation ago, and (2) a Mrs. rather than a Miss.

• Age Differential—Older women are a more important part of the labor force than ever before. Faced with the high cost of living, a lot of them have had to go back to work after an absence of 20 or more years. After the war, when the number of women working began to drop, the group aged 45 to 64 kept right on growing.

You can probably expect this trend to continue. For one thing, women stick to their jobs longer nowadays. Also, a U-shaped work pattern for women is forming: They work not only before but during the early years of marriage, and return to work again around the time they become grandmosthers.

they become grandmothers.

• More Are Married—Meanwhile, the past decade has seen a complete reversal of the proportion of married to single women in the labor force. The bachelor-girl group shrank from one-half to one-third of the total. The married woman has taken her place as the model career girl.

Many of these working wives not only hold down a job and run a home, but raise a family as well. In 1950 a quarter of all working women had children under 18. About 1.5-million had youngsters under school age.

The idea of a working wife is losing

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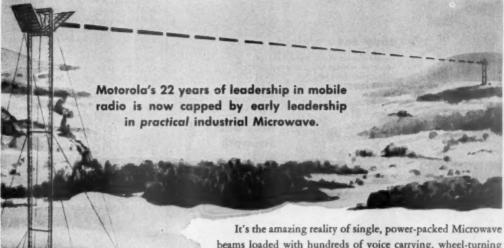
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its stigma. The fact that she pitches, in is no longer generally taken as a slur on her husband's ability to bring home the bacon. Under this setup, marriages tend to become more equalitarian, with the wife helping earn the income while the husband lends a hand with the disines. This creeping change is becoming part of the U.S. way of life (BW—Apt.5'52,p36).

#### IV. Industry Follows Along

The new order is reshaping the whole employment picture for women. To keep in step, industry may have to reorient its personnel planning in the light of these changes:

 From now on, the labor market will have to lean more heavily on older women, leaving the younger group for their family responsibilities.

 There's an increasing need for more flexible working hours, such as night shifts and part-time work, for women with home duties.

 Since women workers now stay longer in the labor force than they used to, there's more emphasis on the question of training women for higherlevel jobs that make greater use of their potential skills.

There's a big call for brush-up training programs for women with work experience who want to return to work.

Home Help—The growing group of working housewives makes the question of community facilities more important than ever. To find the artswer to absenteeism and turnover, it's often a good idea to look at provisions for child care, housing and transportation setups, and shopping and laundry facilities.

#### V. The Future

Looking ahead, on the basis of the present defense program, women are slated for a bigger role than ever. To meet this year's manpower requirements, the Labor Dept. figures it will need about 400,000 workers over and above the normal additions to the labor force. In 1953, when greater non-defense demands may be superimposed on peak defense manpower needs, Labor sees jobs for a million more workers than the normal increase will supply.

• The Reserve Pool—These extra workers will come from reserve groups such as housewives and retired persons, the experts believe. Women without young children are the chief untapped labor pool the U.S. can still draw from if a big extra supply is needed. 'As of March, 1951, there were about 5-million women aged 20-64 who had had work experience in the past 10 years, and who did not have children under six (BW—Mar.22'52,p168). But how many are readily available isn't clear.

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How else would you describe the Grinnell-Saunders Diaphragm Valve? It has proved to be in a class by itself in the handling of highly corrosive fluids, so destructive to most valves. And at the same time it is equally popular where edible fluids must be kept clean, uncontaminated by valve operating mechanism or lubrication.

Important, too, is the valve's streamlined fluid passage, which eliminates clogging by slurries, sludge or pulp stock and likewise prevents trapping of suspended solids in beverages, soups or fruit juices.

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### COMMUNICATIONS



THE MONARCH, world's biggest telegraph cable ship, has been chartered from Britain by AT&T for cable-laying work off Florida.

### Giant British Cable Ship Goes to Work



BUOY marks end of land cable to which ship must splice its own length.



TESTING of cable goes on continuously. Ship carries instruments to measure electrical changes in the cable and the strain on it as it's being paid out.



CABLE is loaded into ship's tank like thread onto a spool. Often it's fed directly into the ship from a shoreside factory.

### For American Tel & Tel (Story on page 104)



SPLICING is done by employee of cable manufacturer. Process is a form of welding.



NAVIGATION of cable ship is a nervous operation. Course has to be correct within matter of yards to contact land cable end off opposite shore.



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His office impressed me first time I saw it. The place had an air of quiet efficiency. He had figures we needed, right at his ingertips. Looking at his desk, I felt big things would get done because details were competently handled.

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Attractive, efficient..."Y and E" helps you get things done—the way that gets the order.
"Y and E" equipment is designed for success.

It delivery on your order for "Y and E" equipment is delayed, you may be sure we are doing our best to overcome the problem as quickly as steel shortage permits.







JOURNEY'S END comes when ship reaches end of opposite shore cable.

#### Cable Ship

PICTURES start on page 102

The Monarch, pride of Britain's General Post Office (which controls telephone and telegraph lines as well as mail), has been chartered by American Telephone & Telegraph Co. The company is going to use it for an Air Force project that will involve cable-laying work between Florida and the Bahamas.

The Monarch, biggest cable ship in the world, weighs 8,056 tons. It's not only big; it's a delicate instrument as well. The job it has to do—laying telegraph cables along the bottom of the sea—is a tricky one that requires a lot of special techniques (see pictures).

Submarine cable weighs anywhere from two tons to 30 tons per nautical mile, according to the type. That means that when you're laying cable in deep water, there's plenty of strain on the cable from its own weight. The ship has to move slowly and carefully, making sure the cable is lying directly on the seabed and not hanging across a valley. If it rests evenly throughout its entire length, it can be expected to last up to 50 years. Otherwise, it can break while the ship is laying it or within a matter of weeks afterward.

Undersea cables were first tried around 1850. In 1857 the first attempt was made to string a cable across the Atlantic. Today there are about 3,500 underwater cables in the world—altogether about 300,000 miles' worth.



### "Surest way to STOP LEAKS in masonry walls!"

Leaky masonry walls send maintenance costs sky-high. Until recently, only expensive major repairs could bring assurance of relief.

Now DARACONE, the bigb silicone content water repellent, makes any type of above-grade, exterior masonry completely rainproof — easily, economically, INVISIBLY! Brushed or sprayed on new or old brick, concrete or cinder blocks, stucco or any porous masonry, DARACONE penetrates deeply, coating pores, fissures and cracks with an insoluble, non-oxidizing, colorless film of water-repellent silicone. Buildings stay bone-dry inside . . . and they

stay clean outside, because DARACONE ALSO sheds dirt and ends the major cause of efflorescence.

With its bigb silicone content, DARACONE, applied to old buildings or written into the specifications for new buildings, provides long-term "raininsurance". One application will last 8 to 10 years or more!

DARACONE is a product of Dewey and Almy industrial research in the chemistry of small particle dispersions... a continuing research program that has brought benefits to almost every industry, through such varied Dewey and Almy products as construction products; Cryovac process for food packaging; sealing compounds; adhesives; organic chemicals; dipped rubber products; shoe products; textile printing products; soda lime.

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### **DEFENSE BUSINESS**



WHAT CAN WE MAKE? That's the topic for this meeting in Nashville. Seated: Maclin P. Davis, left, regional advisory committeeman for SDPA, and John Van Ginhoven, SDPA consulting engineer. Others are federal, state, Chamber of Commerce officials.

WORLD WAR RECORD GOOD, YET . . .

### Defense Pools Start Slow

Pools of small defense plants did a big job in World War II-250 pools filled more than \$600-million worth of arms contracts. In the current mobilization, however, their record is quite different-11 pools have done \$1-million worth of business in the past year.

What the small shops are up against is this: There just isn't the pressure today for using every manufacturing facility, regardless of cost. So the pools that organize with fanfare and enthusiasm find themselves whistling for war business. Their only hope is that defense procurement has reached a turning point where small industry will be put to work.

Take Nashville. It has two pools in the making that illustrate part of the problem: how a pool goes through the red-tape mill to set itself up. That's a long and tedious procedure, though it didn't dampen the enthusiasm of the Nashvilleites.

#### I. Nashville in Making

Last February John Van Ginhoven, consulting engineer for the Small Defense Plants Administration (picture above), came to Nashville to talk with representatives of the Chamber of Commerce, Reconstruction Finance Corp., state planning groups, and small plant

operators. He explained the two chief ways a pool can be organized:

• An incorporated pool, with directors elected from among the owners of the small shops. The corporation takes prime contracts (or subcontracts if the bigger jobs aren't available) and parcels out subcontracts among the members.

 A "mother hen" pool, in which one company takes the contracts and the prime responsibility, then subcontracts jobs to the other outfits.

Whichever way a pool is set up, Van Ginhoven pointed out, the purpose is the same: to form an integrated industry that's capable of handling complete manufacturing processes and get arms contracts that no individual shop could bid on.

• Mother Hen—In less than a week, the first pool shaped up. It chose the "mother hen" form, which differs from usual subcontracting only in that the leading company lines up the smaller shops before it looks for a contract, rather than afterward. Metal Products Co. took on the job of mothering the flock, though it's one of the smaller companies in the pool, with only 25 workers.

Wesley Dyer, president of Metal Products, quickly lined up 41 Nashville electronics and metal fabrication companies and research groups. "Nearly eveverybody was anxious to get into the act," Dyer says. "Those I didn't call called me. A lot of fellows feel that small plants aren't getting a fair share of defense contracts, and they're hoping this may be the answer."

The 41 companies range in size from Temco, Inc., with 450 employees, down to Rogers Engineering Co., with 11.

• DPA Approval—The first step in unraveling the red tape was to get approval from the Defense Production Administration. The pool also had to get antitrust clearance from Justice Dept. and Federal Trade Commission, besides blanket exemption from Section 1-A of the Walsh-Healey Act (a requirement that government contracts of \$10,000 or more be awarded to "regular dealers" in the goods to be bought).

At the same time, the pool had to look ahead to snaring some business. Members put their heads together and agreed on a master flow chart showing nearly 150 end products they can turn out: landing barges, bombs, molded plastics, sonar apparatus, flame throwers, guided missiles, hypodermic needles, operating tables, metal lockers, television sets, jigs, and fixtures.

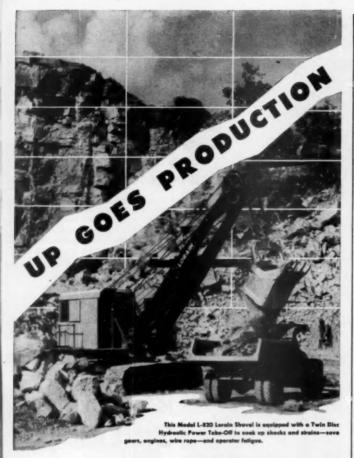
These items are classified according to the branch of armed services that might need them. The chart is on file



POTTER REPRESENTATIVES IN PRINCIPAL NEW ENGLAND CITIES NEW YORK AND PHILADELPHIA



At Leading Office Furniture Dealers from Coast-to-Coast



Industry produces more and more because it gets more out of its power-because with the increased use of powered equipment new and better methods have been developed to put these machines to work.

Whether it's in producing more coal or other minerals-or moving dirt quicker-today's mammoth shovels perform most efficiently when Twin Disc friction clutches or hydraulic drives transmit the power.

Ever since World War I Twin Disc has worked with industry in improving the driving mechanisms of productive machinery. That's why, today, Twin Disc units are used in leading makes of all kinds of industrial machines-metal working, textile, chemical, logging, construction, fishing, petroleum, farming-and mining. America's power is GOING UP . . .

> ... and TWIN DISC applies the productive power!





DISC CLUTCH COMPANY, Rotine, Wisconsin . HYDRAULIC DIVILION TO

BRANCHED CLEVELAND . DALLAS . DETROIT . LOS ANGELES . NEWARE . NEW ORLEANS . STATTLE . TOLSA

'...'We've done everything they told us to do-now are they going to produce?"..."

DEFENSE POOLS starts on p. 106

with SDPA: Van Ginhoven has made a field inspection and has certified that the pool can perform contracts.

'Now we've done everything SDPA told us to do," Dyer says, "and we're marking time to see if they are going to produce.

• Ready to Go-It's up to the pool to solicit its own business, though SDPA helps by putting pressure on military procurement brass. Members of the pool also have to arrange their own financing; SDPA has promised to help swing RFC loans.

The pool has a nine-man advisory board to guide members in financing, materials procurement, priorities, and quality control. Six board members are company heads, including Dyer as chairman; the others are an RFC man, a banker, and an attorney.

Like all pools, this mother hen operation is purely voluntary-members can join or withdraw at any time, except when they have a subcontract on

"We want to split any contract into as many parts as possible," says Dyer, 'in order to bring more small plants into the program.

· Another Approach-The second Nashville pool was formed this spring by 25 makers of light and medium metals products. It, too, has filed its master flow plan with SDPA, and it's readyat the drop of a prime contract-to incorporate as Cumberland Valley Associated Industries, Inc.

"We formed this pool," says John W. McDougall, sheet metal fabricator, "because we feel there are many items we could produce which would be outside the scope of the first pool. Our capitalization will depend on the size of contracts we can get.'

#### II. Optimistic Omaha

The catch, of course, is getting contracts. Until now, most pools have ended up pretty hungry. But the oldest of the post-Korea pools, Omaha Industries, Inc., is confident the famine is over.

Clarence Kirkland, manager of OI both now and in World War II, said this week that his pool is "on the threshold of handling contracts that will make anything we did in World War II look like peanuts.'

· Last War-That's a spacious statement. In the last war the same group carried out more than \$14-million in contracts for radio towers, 115-ton



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# They drive along streets 2200 feet underground

Big, rugged Diesel-powered trucks roll along corridors as wide as average city streets in the world's deepest limestone mine. This Columbia-Southern project—located almost directly beneath its plant at Barberton, Ohio—assures a steady flow of this basic raw material for the manufacture of alkalies by augmenting supplies from other sources.

This unique operation is but one of many developments pioneered by Columbia-Southern to improve production of alkalies and related chemicals and to serve industry more efficiently from plants located at Corpus Christi, Texas . . . Lake Charles, Louisiana . . . Natrium, West Virginia . . . Barberton, Ohio . . . Bartlett, California.

Massive equipment of modern design—capable of moving 300 tons of stone per hour—was assembled underground. Shovels are 1½ yard, electrically powered.

Interesting facts about the world's deepest limestone mine

Limestone is crushed and screened, then brought to the surface by a semi-automatic hoist which attains a speed of 2,000 feet per minute and sutomatically brakes and dumps at the top.

Workings now include a total of 18 miles of entry and room development. Rooms are 32 feet wide, 17 feet high and are stoped up to 46 feet.





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CLARENCE KIRKLAND is full-time manager of successful Omaha Industries.

barges, land mines, canvas cots, wire throwers, ammo boxes, gun parts, and other materiel.

The pool lingered through 1945 with one order for \$200,000 worth of dungarees for the French, then made its valedictory with one small contract for gun parts. It was ready to pick up, though, when mobilization went into high gear a year or so ago. The pool was reactivated, with much the same membership on Apr. 25, 1951.

Omaha Industries has bid on more

Omaha Industries has bid on more than \$20-million worth of government contracts in the past year, has been signed up for \$3-million worth. But all these jobs are subcontracts, and it's only in the last couple of weeks that OI has generated any hope of prime contracts.

• Specialists—The pool concentrates on aircraft work, chiefly because World War II left a huge reservoir of skilled aircraft labor in the area. The production engineer, production manager, and other key personnel of Glenn L. Martin's wartime B-29 plant in Omaha are still in the neighborhood, doing other kinds of work, but available to help on aircraft contracts.

The 103 firms in the pool range in size from Omaha Steel Works, with 475 employees, down to Oehrle & Bergman Co., with four. Air Force officers have rated the pool as having nearly 13-million sq. ft. of floor space available for war work.

Present subcontracts include design and fabrication of tools, jet engine dollies, master gauges, receptacle test sets, and other aircraft parts. SDPA has certified OI as canable of manufacturing 178 end products.

#### III. Worried New York

Greater New York Manufacturing Pool is also a revival of a successful World War II enterprise, with a record of more than \$50-million in war work. Like Omaha Industries, it was revived



# A remarkably useful unit with dozens of applications

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Models for heating with steam or hot water . . . cooling with chilled water. Cooling models may be used for both chilled water cooling and hot water heating.

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Type C — basic Modine Cabinet Unit for wall mounting in either upright or inverted



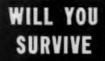
Attractive louvered ple num base — with o without fresh air damp er — makes Type C



Type C with options inlet grille for ceilin use — (heating servionly). Duct connecto



Type CR with face outlet grille and plenum base for recessed installation. This unit for beating only.



- · Rising costs
- Stepped-up competition
- Dwindling labor supply

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with DPA and SDPA encouragement; unlike OI, it hasn't even had a smell of a prime contract.

Right now it has about 60 subcontracts, mostly small jobs, and many of its over 100 member shops are working at less than 50% of capacity. Some are thinking of closing their doors unless they get war business soon.

"We've listened to Washington for more than a year now," one shop man says. "They encouraged us to form our pool so we could take big defense contracts. We organized the pool. Washington approved us. Then—no contracts."

• In Four States—The pool was certified by DPA on July 10, 1951. It is a mother hen type of pool, led by International Banding Machine Co., a subsidiary of Consolidated Lithographing Corp. Members are scattered in and around New York City, in northern New Jersey, and in nearby corners of Connecticut and Pennsylvania. The pool specializes in plastics and in mechanical work; it is looking especially for electronics prime contracts.

SDPA has certified the pool's annual capacity of \$650-million worth of work in the electronics, ordnance, signal equipment, and aircraft fields. The pool has a staff of 46 engineers, and its member shops employ 4,500 workers.

#### IV. Resigned San Francisco

Just how rough the going can be for pools in getting defense work was demonstrated by the Bay Area Electronics Resources in San Francisco. This pool was formed last summer by the San Francisco Chamber of Commerce to get prime defense contracts for about 15 electronics manufacturers in the area. Now it has quietly died on the vine; the pool members haven't bothered to hold a meeting for months.

Two things killed off this pool. First, the members couldn't muster the financing they needed before they could go after big contracts: As one member said, if they were able individually to put up that kind of money, they would have spent it on their own businesses. Second, they never got a serious inquiry from the armed forces on a big job.

Members took the demise of the pool without many tears. They're all pretty busy anyway on regular subcontracting and on civilian work. And the pool at least gave them a clearinghouse for business inquiries from outside the area. John M. Kaar of Kaar Engineering Co. in Palo Alto is still nominally the president of the pool; he routes inquiries to member plants.

#### V. The Full Roster

Many new pools are in process of organizing and getting DPA and SDPA approval, but only 11 pools are listed in Washington as active today. These pools, and their facilities, are on the books as follows:

• Omaha Industries, 103 compan-

ies, 5,800 employees.

• Greater New York Manufacturing Pool, 100-plus companies, 4,500 employees.

Specified Industries, Inc., Chicago, seven companies, 445 workers.
 Mil-Fin, Inc., Waukegan, Ill., five companies, about 600 employees.

Florida Wood Cooperative,
 Miami, 14 woodworking companies,
 employing 642 workers.

• Coordinated Manufacturers of Santa Clara County, Inc., San Jose, Calif., 45 companies, 478 cmployees.

Peoria Consolidated Manufacturers, Inc., Peoria, Ill., 19 companies, about 725 workers.

California War Industries, Inc.,
 Fresno, Calif., 22 companies, 815 em-

• Illinois Manufacturers Defense Pool, Inc., Chicago, 29 companies, 1.200 workers.

 Dade County Industries, Inc., Miami, seven companies, 311 workers.

Small Manufacturers Cooperative of Bridgeport, Conn., five companies, 411 workers.



#### Going for Scrap

Mt. Oliver incline, one of Pittsburgh's oldest landmarks, isn't carrying passengers any more, but it hasn't seen the end of service yet. It's being torn down to add about 300 tons of wrought iron salvage to the nation's hungry scrap pile. The two-car incline, built in 1872, toted a peak load of around 1,500 passengers a day between Mt. Oliver and Pittsburgh's South Side. The original cars, repaired and rebuilt many times, made their final run last summer.

## Alemite Friction Fighters WENT TO WORK HERE!

ADDED: More Production by Reducing Downtime **ELIMINATED:** Product Spoilage Due to Oil Stains



In a leading Southern Textile Mill\*, machinery lubrication was posing more than its share of particular, costly problems. Oil stains, for example, were necessitating extensive reprocessing of finished mill pieces . . proving troublesome . . .

SAVED: A Total of \$6740 Per Year

time-consuming . . . expensive. Was there an easier, more economical way to guard against friction's wear and tear?

To provide an answer, a trained Alemite "Friction-Fighting" specialist was called in to work with the plant engineers. After careful study, he recommended that an Alemite Mechanized Lubrication System be installed and tested on one machine in the mill's important Finishing Range.

Since that time, reprocessing of pieces - due to oil stainage - has been eliminated. Production has been increased through reduced "downtime." The amount of lubricant required has been far lower than ever before. And overall there is an estimated saving of \$6740 per

You can get similar results! No matter what size or type of plant you operate, an Alemite Lubrication Engineer can show you dozens of ways of making worthwhile savings through more efficient handling of petroleum products. These are facts which you can readily confirm in your own time studies. The Alemite man will cooperate fully with your plant engineers in setting up a test. Contact your local Alemite Industrial Distributor, or mail coupon below-to-

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"11 Ways to Cut Production Costs." Include Facts on OIL-MIST -- the amazing new system that atomizes oil, circulates it to bearings under

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### Airborne BELLYFUL for HILL 26

What's it take to cut a hill down to surrender-size? Supplies... men, guns, drugs, plasma, completely assembled equipment. And getting them there without fail is the Fairchild C-119's job. Tough terrain can't baffle these battle-proven "Flying Boxcars." They deliver in a quagmire or a tangled jungle, by parachute or on iron matted runways.

Fairchild designed these rugged aircraft for speed, stamina, versatility. Tribute to Fairchild's engineering skill is that the C-119 "Flying Boxcar" is the number one all-purpose transport for military airlift operations of the U.N. forces in Korea, and for other airlift operations in Europe and the United States.



FAIRCHILD

Aircraft Division, Hagerstown, Md., Chicago, III.

Guided Missiles, Stratos and Engine Divisions, Farmingdale, N.Y.

#### CHECKLIST:

#### Defense Regulations

The following listing and condensed description cover all the materials and price-control regulations issued by the defense agencies during the preceding week.

Full text of the materials orders may be obtained from National Production Authority, Washington 25, or from any Dept. of Commerce regional office.

#### Materials Orders

Tin: Restricts quarterly use of pig tin by small users to 90% of average quarterly consumption during the base period and also requires the user to certify that end-use of the material will be only for those purposes permitted in the order. M-8 as amended (Apr. 9).

Chemical wood pulp: Revokes the order regulating reserve production, consumption, and inventory limitations of market chemical wood pulp. M-72 revocation (Apr. 8).

Machine tool finishes: Limits producers of any new metalworking machine, or any part or assembly to be incorporated into such a tool, to not more than one coat of primer or sealer, no filler except for spot filling of bad cavities or fissures, and not more than two coats of paint, lacquer, or enamel. M-104 (Apr. 9).

Auto wreckers: Temporarily relieves the states of Washington, Oregon, Idaho, and Montana from demolishing a certain number of motor vehicles for iron and steel scrap each quarter. M-92 amended (Apr. 14).

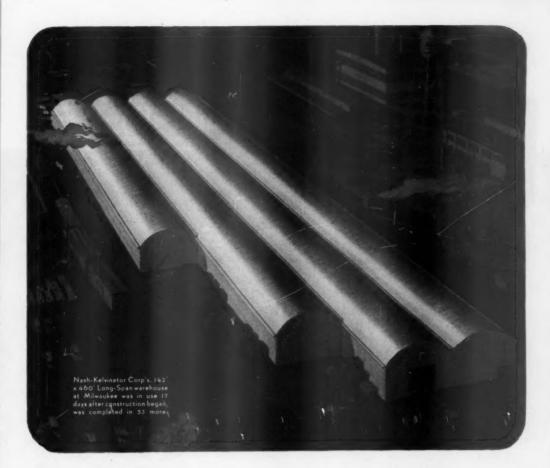
#### Pricing Orders

Processed apples: Authorizes apple processors to increase ceiling prices by specific amounts. This applies to canned and bottled apple juice and cider, canned applesauce, and canned apples. CPR 56, SR 5 (cff. Apr. 14).

Galvanized products: Permits certain producers of galvanized iron and steel products to adjust ceilings to reflect increased cost of zinc. GCPR, SR 76, Amdt. 1 (eff. Apr. 14).

White potatoes: Prohibits sale of white flesh seed potatoes of any kind to, or in, retail food stores subject to CPR 15 and 16 at prices higher than ceilings for table stock potatoes. CPR 113, Rev. 1, Amdt. 6; CPR 15, Amdt. 13; CPR 16, Amdt. 13 (eff. Apr. 9).

Trailer accommodations: Exempts from price control charges for rental of house trailers and trailer space in areas that come under the jurisdiction of the



# For every industrial use . . . the new LONG-SPAN MULTIPLE

YOUR best bet for industrial plant expansion! That's the new, allsteel Long-Span Multiple, the building designed and engineered for maximum industrial efficiency.

The Long-Span Multiple gives an amount of usable, unobstructed interior space hitherto unavailable with mass-produced, prefabricated buildings. Its unique column arrangement provides ample room for modern industrial equipment, complete palletization, and production lines. Its arch roof gives unusual height advantages for low-cost installation of boilers, presses, other tall equipment.

The Long-Span Multiple is easily and economically insulated, skylighted, ventilated. Size is adaptable to any lot or use requirement. Ribs and trusses are of N-A-X HIGH TENSILE steel for long life, strength and economy. It goes up in weeks instead of months.

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### Why not think BIG when you plan on plastics?



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If you have always limited your thinking on plastics to fairly small pieces. we invite you to consider them in a brand new light . . . as material for major units or components.

Bigger presses, improved techniques in custom molding, and the versatility of phenolics developed by Durez have greatly enlarged the utility of moldings in recent years.

Pieces weighing up to 40 pounds and more are now turned out, ready for assembly, at mass production speed. These range up to 15" x 18" x 36' and their size is determined only by the capacity of available presses. The larger the size, the greater is the economy available through elimination of many machining, assembly, and finishing operations.

In large and small moldings the inherent characteristics of Durez phenolics have won them an important place in industry. They mold to critical tolerances. They have outstanding electrical values and resistance to

chemicals and to heat, plus impact strength and permanence of finish.

It will pay you to discuss your large projects with your custom molder. For specialized assistance, feel free to call on Durez technicians in your area.



Office of Rent Stabilization. GOR 14, Amdt. 10 (eff. Apr. 15).

Bakery products: Establishes new ceiling prices for perishable bakery products, including bread, cakes, pies, and pastries. CPR 135; CPR 22, Amdt. 46 (eff. May 10).

Retail beef: Permits retailers who sold beef to consumers by the whole carcass, side, or quarter during the six months preceding Apr. 30, 1951, to resume this practice. CPR 25, revised, Amdt. 3 (eff. Apr. 10).

Corn oil cake, flakes, and meal: Sets a ceiling price of \$64 a ton for these feed products regardless of protein content. GCPR, SR 86, Amdt. 1 (eff.

Apr. 12).

Repair services: Modifies filing requirements for those automotive and farm tractor repairmen who use flat rate manuals or labor schedules to set charges to their customers. CPR 34, SR 3, Amdt. 4 (eff. Apr. 16).

Wholesale pork: Liberalizes merchandising of wholesale pork cuts to permit more practices customarily employed. CPR 74, Amdt. 2 (eff. Apr. 16).

Luxury foods: Exempts artichoke products and pure maple sugar candy from price control. GOR 7, Amdt. 15 (eff. Apr. 11).

Services: Exempts from price control per diem payments, mileage allowances, and charges for protective services incident to the use of certain special types of railroad cars. GOR 14, Amdt. 11 (eff. Apr. 11).



#### 20th Century Icarus

A one-man flying machine dispenses with reassuring features like extra motors and coffee-serving stewardesses. The "Hoppi-Copter," consisting only of a motor and propellers strapped to passenger's shoulders in a knapsack arrangement, is part of an exhibit of Navy technology.

### Top Efficiency Achieved by **Matching Speed and Need**



**Industry** can vary machine speeds to fit the job—thanks to the amazing flexibility of LINK-BELT P.I.V. Variable Speed Drive

demands. That's why more and more industries are putting Link-Belt's P.I.V. Variable Speed control to work.

For only P.I.V. offers you both: infinitely variable stepless speed changing plus positive chain-drive power transmission. You select the speed your work requires . . . get it quickly with manual or automatic control . . . then maintain it accurately through continuous or intermittent operation.

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### MANAGEMENT

When GE says this...

7 Decentralized Operations this...

Operating departments and divisions have authority and responsibility to make decisions on development, manufacture, and marketing of products they produce, or services they perform.

... and this is its effect

As in a small company, operating unit can move faster, is more flexible.

2 Centralized Services Service divisions provide advice on research, marketing, human resources, engineering, manufacturing, finance and accounting, and management consultation. They do not exercise direct responsibility or control in those areas.

Big company advantage of sizable service staff is retained. Cost is spread over all departments.

3 Centralized Management Controls

Controls over such areas as law, accounting procedures, quality of product and service, national employment policies, and expansion or reduction of capital facilities, are still centralized in the executive office.

Overall company performance can be watched, policies made, and planning undertaken, with more time available to do so.

### GE Gets the Small-Business Touch

When Charles E. Wilson left General Electric Co. a year ago December, a reshaping of the company's organization structure was already in progress.

tion structure was already in progress.

This week, Ralph J. Cordiner (cover), his successor as president, was able to tell several thousand shareholders at the annual meeting in Schenectady that a great deal more had been done. He explained that special emphasis had been placed on organization planning during the past year.

"The planning the past veri "The planning job has been done," he said. "That kind of organization is now basically in place." The kind of organization that Cordiner was talking about is generally described as a decentralized setup.

• More Authority, Lower-In simplest terms, GF's plan means more and more decisions are made at lower levels of management while less authority and responsibility for operations are held at the uppermost level (chart). It isn't the sort of thing you can understand or even detect by looking at an organization chart. It is a management theory being put into practice to help solve problems inherent in a large, growing corporation.

herent in a large, growing corporation.

• Penalty of Success—GE, like others, has had those problems. The highly diversified activities of the company, for example, pose this question: Can any one man, or any group of men, or any central planning commission efficiently run all parts of a business that has so many varied lines?

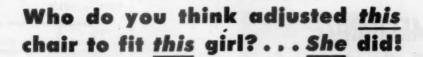
When GE was incorporated 60 years ago, there was no such problem. At that time, the company had three principal lines of business: electric

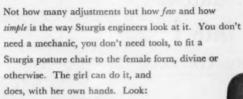
utilities, transportation, and lighting. Now, so many product lines have been added that the business is broken into more than 50 departments; eventually, that number may go up to 75.

that number may go up to 75.

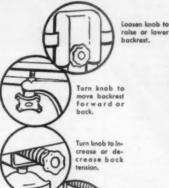
\*Basic Change—Of course, organizationwise, GE hasn't stood entirely still while the company expanded. All sorts of adjustments have been made as conditions changed. But the need for a more fundamental shakeup had been growing as the very size of the problem increased. It looked increasingly as if GE needed a more complete decentralization of operations and a division of responsibility that would carry out the idea of decentralization. Then came the ultimate decision to give the organization structure a good shaking.

Even so, it wasn't all done at once. The apparatus department, for ex-





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Turn handwheel to raise or lower sept.

Simple and easy, isn't it?



#### Sturgis chairs are engineered for keeps.

You can't see all the quality engineered into a Sturgis chair but it's there in full measure—and because it's there a Sturgis chair is a long term investment in office comfort and efficiency. Today the finest executive, secretarial, clerical, guest and institutional metal chairs are being produced by The Sturgis Posture Chair Company, Sturgis, Michigan.



# MECHANIZE 4 Gerubbing Operations into 1

with a COMBINATION SCRUBBER-VAC!

Here's a timely answer to the need for conserving manpower and reducing labor costs - a single cleaning unit that completely mechanizes scrubbing. A Combination Scrubber-Vac applies the cleanser, scrubs, rinses, and picks upall in one operation! Maintenance men like the convenience of working with this single unit . . . also the features that make the machine simple to operate. It's self-propelled, and has a positive clutch. There are no switches to set for fast or slow - slight pressure of the hand on clutch lever adjusts speed to desired rate. Powerful (quiet) vac.

Model 213P Scrubber-Vac at left, for heavy duty scrubbing of large-area floors, has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour! Finnell makes Scrubber-Vac Machines for small, vast, and intermediate operations, and in self-powered as well as electric models. It's also good to know that you can lease or purchase a Scrubber-

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BRANCHES IN ALL PRINCIPAL CITIES "... The basic operating unit is the department. It is on that ... decentralization ... rests ..."

MANAGEMENT starts on p. 118

ample, already had been split in twoone part handling large apparatus and the other, small apparatus. As a result of the big move toward decentralization, however, the old apparatus department now is styled an apparatus group with five divisions and 16 departments under it.

#### I. Autonomy

The basic operating unit in the new setup is the department. It is on that level of management that the decentralization program rests.

The manager of a GE department has been given full authority and responsibility to direct the business of his own department within the framework of general company policies. He makes decisions relating to his unit's manufacture, marketing, and development of products or services.

• Independent Businessman—Because he has so much decision-making authority, he comes pretty close to being the operator of an independent business. And it isn't just a matter of making decisions and letting somebody else worry about the outcome. The department manager is held accountable for the successful operation of the business. Again, he's like an independent businessman. It's up to him to make a profit.

• Planning—Each department has a budget of its own. Sales, expenses, and capital expenditures are budgeted on a yearly basis. The manager knows how he is doing because he gets monthly reports on his budgeted operations (12 days after the end of a month).

He also makes a five-year forecast. That covers such things as volume, facilities, employment, and engineering. At the end of each year, the forecast has one year shaved off the near end and another year added on the far end. In that way, the five-year forecast is perpetuated. Here again, the preparation of the forecast is the responsibility of the department head. It isn't something handed to him to follow; he himself attempts to forecast what he will be able to do in the five years ahead.

The department heads are supposed to be qualified by experience, talents, and training to concentrate on the special problems and potentialities of their own departments. In that way, GE can reasonably hope that all the varied businesses, represented by the many departments, will be run with the same

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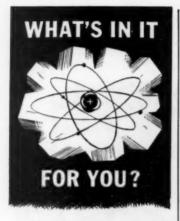
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initiative, imagination, and enterprise that GE had in the early days, when there were only three departments.

#### II. Integration

The men who run the departments with so much operating freedom are, of course, well joined into the over-all company setup. Otherwise, the advantages of a big company would be minimized or lost.

Cordiner puts it this way: "We don't want the operating departments to become so independent that they will lose these advantages which include both a rich inheritance from the past, and a vast amount of present knowledge, experience, and talent in research and engineering, manufacturing, marketing, finance, employee and public relations, and corporate and legal affairs. There are also advantages in companywide coordination of such things as recruiting, educational activities, and training programs.

· Grouping-Integration of the decentralized departments is accomplished first by putting the related ones together into divisions.

Over the GE divisions, on the next layer of the pyramid, are five groups. Three of them are headed by executive vice-presidents: Henry V. Erben is in charge of the apparatus group, Robert Paxton has the industrial products and lamp group, and Roy W. Johnson has the appliance and electronics group. The associated, affiliated, and foreign companies group is under the direction of Philip D. Reed, chairman of the board. The defense products group is under vice-president John W. Belanger.

These group executives are a part of the executive office. There are 12 others in the executive office besides them and the president-nine vice-presidents. a secretary, a treasurer, and a controller. One of the nine vice-presidents is Harold F. Smiddy, in charge of management consultation services. He is the one who has worked most closely with Cordiner on doing over the corporate

· Planning, Managing-The function of the 12 as a part of the executive office is to help the president and the group executives with the company's planning, organization, coordination, and leadership, and in the appraisal of over-all performance.

These dozen officials really double in brass. They not only work on planning at the executive office level. but they also run service divisions. These divisions provide services of all types to the operating units. They teach, appraise, they suggest, but they never command.

For example, the manufacturing services division might report to one or all



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of the operating units that there is a new machining process that might be worth adopting. But it is the department manager receiving the suggestion who must decide whether or not it shall be adopted. He would hardly brush off a suggestion, because he knows it's the job of the service divisions to find out the best methods of making and selling things. But always, in making decisions, he has to keep in mind that he's got to be right.

 Board of Visitors—Twice a year there is a business review of each department. This review is conducted at the headquarters of each operating unit, not at the general company headquarters.

This means the department manager is visited by a group that probably includes Cordiner, the group and division manager over the department, and the five vice-presidents handling manufacturing, marketing, finance, engineering, and employee relations at the home office. For most departments, the reviews can be completed in a day. Sometimes, two days will be spent on some of the larger departments.

In these review sessions, the managers are asked not only where they are now and where they have been, businesswise, but also where they are heading. In the spring review, they are checked as far ahead as the end of the year. When the autumn review is made, the projection goes all through

the following year.

• Several Yardsticks—Measuring performance of department managers is not limited to the volume of business produced. Departments are checked on the return made on investment. Top management also wants to know how each department is doing on quality (the number of complaints can be a good index). Management also wants to know what is being done about costs. One of the big steps in this direction at GE is to cut the number of models believed necessary to serve the market—three models of electric flatirons, for example, replace 26 previous models.

example, replace 26 previous models.

Top management of GE gets an extra dividend out of these sessions, too. Here is an opportunity to observe the department managers, see how they handle themselves in discussing problems and progress with their chiefs. "We see them all on parade," says Cordiner.

#### III. Gain for Executives

Decentralization has been a boon to the top echelons of the company in another way. Cordiner recognizes that there is a great hazard in overloading executives at the highest levels. The new plan redistributes the load among the five group executives. But they should not be overloaded, either. So there is a further breakdown into divi-



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"... Today only two committees are associated with the executive office ..."

MANAGEMENT starts on p. 118

sions and finally into departments, with authority delegated all the way down the line.

 More Time to Think—An important gain for top management men is that a larger part of their time is available for forward planning. That gain was made possible partly by decentralization of responsibility, partly by a sharp departure from GE's old committee form of administration.

Today only two committees are associated with the executive office. There used to be 47 management-type committees. With all those committees wiped out, the decisions formerly made by them are now made by single individuals, who are charged with the responsibility for those decisions.

The two committees still linked with the executive office are (1) the advisory committee and (2) the appropriations committee. The latter committee's function is fairly obvious, having to do with the over-all spending by the corporation. In the advisory committee meetings, broad company policies are mapped out and announced for the guidance of lower echelons.

 Still Changing—So far, no manuals have been prepared on organization and policy. But they are being planned right now.

Even the issuance of manuals won't mean the end of the road for the GE reorganization project. As Cordiner sees it, the job is never-ending. It will have to keep changing as the company's business itself changes and grows.

• A Growth Industry-Cordiner likes to point out that in 1935 the electrical industry's sales amounted to only 1.2% of the gross national product. By 1941 this percentage had increased to 2.2%, and by 1950 it was up to 3.8%.

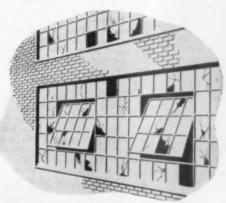
"There is every reason to believe," Cordiner comments, "that this trend will continue to accelerate because of the growing need for increased productivity, which means increased mechanization and broader demands for electricity and electronics in industry." He cites estimates that electrical goods' percentage of gross national product will be in the neighborhood of 5% or 6% by 1960.

"We are blessed," Cordiner said, "in being a pioneering industry, with great opportunities for growth even though GE continues to confine its business activities to those fields in which its management believes it has a specific contribution to make."

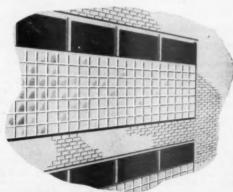
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TODAY'S executives want to make sure there are trained men to take their place. That's one reason Alfred P. Sloan, Jr. (right), General Motors chairman, has donated \$6,250,000 to MIT for a new management school. Dean of the school is Edward P. Brooks (left), former Sears vice-president.

### Can You Teach Management?

Here's how MIT sets up graduate school designed to educate men in the techniques of general management in manufacturing—rather than in one phase of business.

The day of the truly professional general management man isn't here yet, but it's not far away. That man will be trained for management in general, rather than in any one phase of business. He'll learn his technique in school, rather than on the job.

Most top-flight executives in industry today are one-time specialists (engineers, chemists, lawyers, accountants) who had little or no formal education in the broad field of managing people. They learned after they left school how to run a business. That's true, too, of management men who are still at the middle level. They are usually trained in some specific function: marketing, design, production, finance.

• College Courses—This is slowly changing. All across the country in the

past couple of years, management education courses have been popping up in colleges. For the most part, they're designed for middle management men who have been trained as general executives.

The 1952 crop includes new courses opening at Columbia University this summer, at Stanford University, at the Universities of Georgia, Indiana, and Wisconsin. Wittenberg College is supplementing its supervisory course (BW-Oct.6'51,p84) with one for management men. Most of the spark for such courses comes from businessmen themselves. For example, the Indiana course was started by request of Midwest companies.

 Sloan's New School-Biggest and most significant of the crop, though, is the new graduate school at Massachusetts Institute of Technology. It was launched two years ago by Alfred P. Sloan, Jr., General Motors chairman (picture). His Sloan Foundation donated \$5\frac{2}{2}\text{-million} to create the graduate School of Industrial Management at MIT. Last week the foundation added another \$1\text{-million} as a grant for research into management problems.

Sloan's idea dwarfs the lineup of management courses in college programs around the country. He is financing the building of a whole school for training in this field. Results will show next fall, when the new school

opens its first term.

Next month the school's pioneer staff will move into permanent quarters, the former home office of Lever Bros., Inc., near the MIT campus on the Charles River, Cambridge, Mass. MIT took over the building when the soap company moved to New York. It's now the Alfred P. Sloan Building.

Less than half of Sloan's original grant was used to buy the building. The rest, at the rate of \$275,000 a year for 10 years, will pay salaries and

operating costs.

• Engineering Angle—Sloan had two big reasons for choosing MIT as the site for his management school. First, it's his alma mater. Second, he thinks problems of production have become so complex, so technical that it takes managers with a strong engineering background to solve them best.

MIT is well aware of its responsibility in blazing a trail for management schools. The MIT school is not merely a copy of Harvard's Graduate School of Business Administration, three miles up the Charles River. Harvard's school, long-time leader in the business education field, covers the general administrative field; MIT's school will concentrate on the management of manufacturing industries.

 Practical Idea Man—Down of the new school at MIT is Edward P. Brooks, who came from the post of manufacturing vice-president of Sears, Roebuck & Co. He is still a director of Sears. When he took the MIT post, he told Sloan he might come up with some unusual ideas.

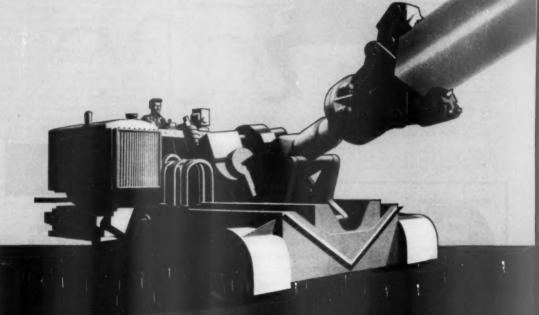
"The more unorthodox you become, as long as the ideas promise well, the better I'll like it" said Sloan

better I'll like it," said Sloan.

Brooks' first decision was to start from scratch, not merely to build on what other schools already are doing in business courses.

Thus far, Brooks' desire for unorthodoxy hasn't resulted in any clearcut program for the school's opening next autumn. But he has laid down some broad policies.

 No Specialists—For one thing, MIT's new school will have a curriculum that breaks away from the usual method of space.



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teaching by compartments-finance, marketing, production. He wants these integrated into one over-all program, so that graduates don't become specialists in any one field.

To help solve this problem, Brooks appointed what he calls a task force, a group of educators and industrialists who meet twice a week to lay out

plans for the course.

This integration of the separate functions of business is Brooks' pet project. He looks at the job from the point of view of a Sears' executive. At Sears, distribution—the company's main function—is thought of in its broadest sense. It starts from the conception of the idea for a product, through fabrication, transportation, and sales to the ultimate consumer. Brooks puts it this way:

"At Sears, we require our buyers to know not just purchasing and selling, but also something of the psychology of demand, something of production

and transportation."

He wants to carry that concept of continuity into MIT's school.

"That's the way top management thinks," he says. "Not in separate compartments labeled marketing, production, accounting, but in broad sweeps integrating them all into what we think of as distribution."

we think of as distribution."

• Working Together—Organization is another area that Brooks' educator-industry groups are studying in order to come up with a fresh approach. If Brooks gets what he wants, students will come away with a solid knowledge of how men work together. This means going back through history to study primitive forms of organization, then up to the complex forms found in government, religion, military, business.

emment, religion, military, business.

Another group at MIT is planning a course that will show how management fits into the social picture. This will be designed to put business in perspective, pointing up the social and polisical implications of executive decisions.

 Sound Basis—However the school finally shapes up, it should be grounded on a lot of practical ideas from some of the

best minds in business.

Brooks himself is certainly far from being an academician, a good reason why MIT's school probably will be different from any other. Since 1939, he had been in charge of Sears' factory properties, with the job of decentralizing manufacturing operations. He served Sears for 24 years, starting as a retail merchandise manager. For one year (1933-34) he was assistant to a U. S. Steel vice-president.

He was picked to head up MIT's school chiefly because of his practical background. Besides that, he is an MIT graduate. His class, 1917, was the first to come out of the undergraduate Dept. of Business Engineering and Ad-

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and industry—and the ready acceptance of Arabol products by users of industrial adhesives—caused a phenomenal increase in the West Coast business. A much larger manufacturing unit was installed in 1947 at 1950 - 16th Street, San Francisco. This is the largest plant of its kind West of the Mississippi River; it serves adhesive users in Nevada, Utah, Idaho, Northern California and the Pacific Northwest.

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ministration. This department is now under his jurisdiction as dean of the graduate school.

• Advisers—To supplement his own management savvy, Brooks has named a business advisory council made up of 25 chief executives in industry. They are men such as Frank W. Abrams, Standard Oil of New Jersey; Crawford Greenewalt, du Pont; Gwilym Price, Westinghouse, Clinton Golden, former vice-president of CIO-United Steelworkers, is also on the council as a labor expert.

These men are advising Brooks on the kind of training the students should get. Once the school gets rolling, Brooks hopes to call on some of them to lecture as visiting teachers for two to six weeks at a time. David E. Lilienthal, former head of the Atomic Energy Commission, already is scheduled to talk on government and business, and David Edwards, president of SacoLowell Shops, has signed up for an extended tour of teaching.

On top of this, Brooks wants members of the advisory group to offer their companies as laboratories of industrial management where students can work alongside executives. They'd get a firsthand look that way at genuine management problems and see how they are solved.

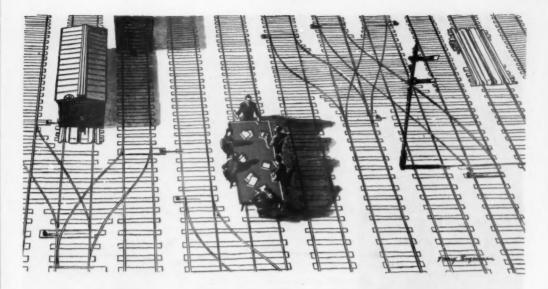
• Masters' Degrees—At the outset, the students will be engineering or science graduates. They'll become Masters of Science in Industrial Management. One reason for the enrollment requirement is that both Brooks and Sloan think the best-qualified men for top management jobs are more often those who have a scientific education.

Brooks admits that this point of view probably ignores a lot of good talent. Later he hopes to weave a general engineering course right in with his management curriculum. A committee is working on that problem, too.

• Fundamental Question—Last week's \$1-million Sloan grant will mean a lot to the school. For one thing, it can be used to study the basic problem MIT is now struggling with: How do you teach management, if it is possible at all?

In addition, it will give MIT a chance to dig into management areas that need the kind of detached scientific approach MIT professors can bring. Projects now being discussed are executive incentives, location of production facilities, obsolescence of equipment, human motivations, management controls.

There has been work done in all these fields—some going back many years. But few schools have ever had the kind of financial backing MIT can expect from the Sloan Foundation. Sloan already has announced that, if the first stabs at research pay off, MIT will get more money.



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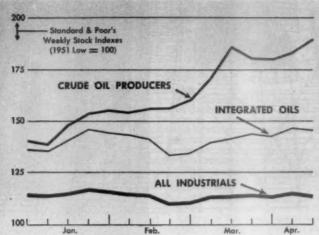
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can quickly explain the Keysort method to drop in. Or mail the coupon below. MAIL THIS COUPON TODAY. THE MOBEE COMPANY 295 Madison Avenue, New York 17, New York Please send me details on McBee's production control methods. Sole Manufacturer of Keysort - The Marginally Punched Card 295 Madison Ave., New York 17, N. Y. Offices in principal cities. BW-4-19-52 The McBee Company, Ltd., 11 Bermondsey Road, Toronto 13, Ont.

### FINANCE





				1951 P	or Share	Price-						1951 Pr	or Share	Price-	
CRUDE PRODUCERS	1951 Low	Racont	%. Gain	- Earnings	Birl- dends*	Earning Ratio	% Yield		1951 Luw	Recent Leval	% Sain	Earnings	Biri- dende*	Eurning	Yield
Amerada Petroleum	\$80.50	\$225.00	179.5	\$5.17	\$3.00	44:1	1.33	Standard Oil (Ind.)	\$59.00	\$87.00	47.5	\$9.71	\$2.25	9:1	2.59
American Republics	44.50	\$4.00	21.3	3.17	1.50	17:1	2.78	Standard Oil (N. J.)	45.37	76.50	68.6	8.72	4.13	9:1	5.40
Houston Oil	84.75 -	84.00	53.4	6.42	2.50	13:1	2.98	Sun Oil	61.12	84.25	37.8	6.85	0.91	12:1	1.08
Lo. Land & Exploration	32.50	51.00	56.9	€2.90	2.50	18:1	4.90	Texas Co.	40.75	57.25	40.5	6.50	3.05	9:1	5.33
Pacific Western Oil	13.75	25.12	82.7	1.60	-	16:1	-	Tide Water	31.42	47.75	\$1.0	E4.00	2.15	8:1	4.50
Seaboard Oil	74.90	98.00	32.4	5.26	2.75	19:1	2.81	Union Oil	33.87	43.37	28.0	5.01	2.00	9:1	4.61
Superior Oil of Cal.	355.00	540.00	57.7	31.43	4.00	18:1	0.71	OTHER OILS AND "N	EAR OIL	Ç"					
Woodley Petroleum	14.00	69.75	398:2	£1.50	0.59	47:1	0.72	Colgary & Edmonton	4.87	15.62	127.4	0.17	0.10	92:1	0.64
INTEGRATED COMPANIES						Colven Con. Oil & Gas		8.07	74.7	NA	None	24:1	0.04		
Atlantic Refining	60.25	87.12	44.6	12.20	4.00	7:1	4.59	Canada Southern Oil	3.62	13.50	272.9	NA	None		
British American Off†	13.75	24.62	79.1	NA	0.62%	-	2.54	Canada Soumern Oil	21.75	39.12	79.9	2.76	1.75	14:1	4.47
Cities Service Co.	82.50	108.75	31.8	14.71	5.00	7:1	4.60	Central Explorers	2.20	12.00	445.5	NA.	None	1421	AAI
Continental Oil	44.25	71.00	60.5	4.25	2.50	17:1	3.52		3.25		215.4	100		-	
Gulf Oil	40.75	56.50	38.7	5.17	2.00	9:3	3.54	Con. Royalty Oil	-	13.50	-	NA	0.22	-	1.43
Humble Oil	51.12	80.37	57.2	E5.00	2.25	16:1	2.80	Devon Leduc Oils	0.93	3.07	230.1	NA	None	-	-
Imperial Oil;	25.87	39.75	83.7	1.20	8.65	33:1	1.64	Ini. Petroleum	10.25	39.00	280.5	E2.15	1.00	18:1	2.56
Mid-Con. Petroloum	53.25	71.50	34.3	9.18	3.75	8:1	5.24	Jupiter Oils 9	0.65	5.00	669.2	NA.	None		-
Pura Oli	46.12	65.73	42.6	7.88	2.50	8:1	3.80	Northern Pacific Ry. <sup>27</sup>	31.78	89.25	181.1	6.44	2.25	14:1	2.52
Shell Oil	51.00	81.25	59.3	7.20	3.00	11:1	3.49	Pacific Petroleumsi	7.00	13.25	89.3	0.06		221:1	-
Sinclair Oil	34.25	45.00	31.4	6.78.	2.50	7:1	5.56	Rayulite Gill	11.12	19.87	78.7	NA	0.26	-	1.31
Skelly Oil	68.25	93.00	36.3	10.82	2.95	9:1	3.17	Supplier Patroleums	1,40	4.50	221.4	NA	None	-	-
Socony-Vacuum Oil	25.12	39.12	53.7	5.08	1.80	8:1	4.40	Sevey Oll	3.25	11.12	242.2	NA	None	-	-
Standard Oil (Cal.)	44.00	55.75	26.7	4.05	2.60	9:1	4.46	Tex. Pacific Land Trust	80.00	187.00	133.8	NA	1.55	-	0.83

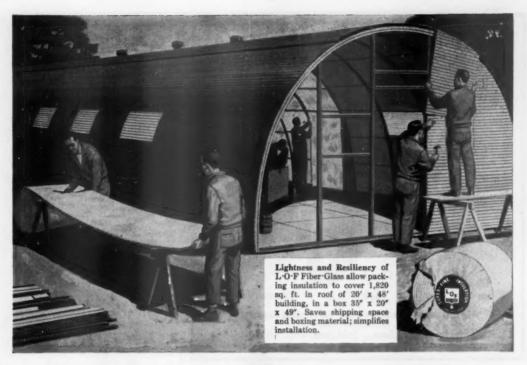
\*Cash dividends. †Second biggest Canadian ail company. †Biggest Canadian ail company. ‡Western Canada campanies. \*Rails bought as "alls" due to premising land holdings. NA — Not available.

### Risk Capital Follows Pied Piper Oil

The economists may be right. Postwar business may be afflicted by a general and very serious dearth of risk capital. But you'd never guess it from what has been going on in oil stocks. The mere mention of oil is enough to raise money these days. There's smart money, and there's crap shooting money. There's big money, and there's the mite counted out of the teapot.

A lot of it may be a good bit riskier than the name "risk capital" ever was intended to imply.

And if ever there was a market where the buyer could pay his money



### Government choice for insulation

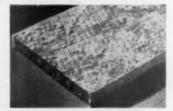
L-O-F Super-Fine Fiber-Glass blankets easy for inexperienced men to install

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Fiber Glass for 2,000 structures has already been shipped from Libbey Owens Ford's new plant at Parkersburg, W. Va. This same plant is making Fiber Glass that is highly efficient thermal and acoustical insulation in aircraft, automobiles, trucks, and for heating, refrigeration and electrical equipment. Other forms are available, too, for reinforcing paper, plastics and for textiles.

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**NEW ISSUE** 

April 7, 1952

#### 410,121 Shares\*

#### The Quaker Oals Company

Common Stock (\$5 Par Value)

\*All of these shares have been sold. Subscription Warrants for these shares were issued initially to holders of the Common Stock of the Company. Warrants for 396,472 shares were exercised during the subscription period by such holders and their assigns (including the several Underwriters). The several Underwriters purchased from the Company and resold the remaining 13,649 shares.

#### Glore, Forgan & Co.

William Blair & Company

Blyth & Co., Inc.

Eastman, Dillon & Co.

The First Boston Corporation

Lee Higginson Corporation

Merrill Lynch, Pierce, Fenner & Beane Smith, Barney & Co.

White, Weld & Co.

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and take his choice, this is it. The biggest and most conservatively managed oil companies have needed new money to finance exploration, well drilling, larger and more intricate refineries, petrochemical facilities, and distribution systems. Well-established but smaller concerns have felt similar cash requirements even more acutely. And then there are the Johnniescome-lately-those with properties, those with hopes, and those with wily pro-

· Not Always a Winner-So far, there have been profits for all (as the tabulation shows, page 132). But the biggest profits haven't always been where you might have expected: Shares of leading oil companies (though they have done much better than the market) haven't usually been the best gainers.

It all started this way. New strikes in western Canada and the Williston Basin of North Dakota-Montana touched off a speculative wave. Big money has been going into the shares of actual and potential crude oil producers, particularly in these new fields.

A popular "legitimate buy" in connection with Williston Basin, for example, has been Amerada Petroleum Corp. It has already struck oil in the area. These wells, Amerada's backers contend, could prove the key to the most important single events so far for this discoverer of crude oil.
Imperial Oil, Ltd., for another, beck-

ons those anxious to get in on the Canadian oil boom. Imperial has long been the Dominion's biggest oil producer and refiner. And it is reported to have some 25-million acres under lease in the Prairie Provinces.

· Environment Counts-Much "smart money" has also been going into the shares of some nonoil companies lucky enough to have immense land holdings in and contiguous to these new fields. Northern Pacific Ry. common, for instance, has zoomed to twice its 1951 low, due to that road's huge Williston Basin land holdings. Up sharply, too, is Canadian Pacific ordinary stock: It has big land holdings in west Canada.

· Wildcats?-Not everyone participating in the oil stock boom, however, has limited his purchases to stocks of these particular types. Plenty of money (page 140) has been going "out into

the wild blue vonder.

· North of the Border-That has been particularly true where Canadian oil is concerned. Over 200 companies are now "participating" in the development of oil fields north of the border. Many, too, are newly organized companies that initially financed their operations with offerings of "penny stocks." And, obviously, not all of them are going to hit the jackpot. The business of locating oil and gas wells is risky at best. Sound and experienced man-

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HYATT ROLLER BEARING JOURNAL BOXES

Cutaway shows how Hyatt freight car journal boxes fit into existing freight

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E. J. Thomas, President of the Goodyear Tire & Rubber Co., says:











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agement, plus substantial working capital, are usually required. And if investors are to cash in on their speculative ventures, they should be long on patience.

• Money Needed—Take, for example, the geographical location of Canada's oil fields. Because they are located far from their end markets, huge sums must be spent on either pipelines or refineries—perhaps both—to make proper use of their production of crude. So until that is done, it is doubtful that Canadian production will be on more than a limited prorated basis.

What these factors point to, obviously, is that those who wish to participate in the future development of the Canadian oil industry should be prepared to wait things out—and today may not even be a good time to dive in. Prices of most stocks, conservative Wall Streeters agree, already seem to have discounted a great deal of the industry's future.

• Better Bet-Brokers who are worrying over the speculative froth on Canadian oils aren't quite so cautious about advances in stocks participating in the Williston Basin discoveries. That goes for the pro's managing the investment portfolios of the trust trade, too.

At the close of 1951, for example, the open- and closed-end investment trusts actually owned 14.8% of all Amerada Petroleum's outstanding shares (BW—Apr.12°52,p173). It was then the trusts' most popular holding, and there have been no indications since of a change of heart, despite the 53% advance the stock has scored since the vearend.

Nor is there much indication that smart money going into Northern Pacific common in recent months is turn-

ing timid.

• But . . .—On straight statistics, though, some doubts are beginning to show up. The basin may, as many geologists predict, prove all oil and miles wide. Yet this question remains: Haven't the prices of Amerada and Northern Pacific already more than discounted everything those companies are apt to gain from the basin for years to come?

This applies particularly to Northern Pacific. While it has extensive holdings in the basin, it is going to be some time before any large oil earnings will turn up as common dividend payments. Since most of the land in questing is pledged to secure outstanding bonds, a lot of the expected "oil income" will have to be channeled into bond retirements and property improvements.

 Figure It Out—It might also pay prospective buyers, as well as current holders, of all oil shares to engage in some simple mathematics.

As one prominent Wall Street house suggests, figure out the gain in market value the issues in question have scored



George Mole has been a contractor and industrial building owner in the Amityville, Long Island, area for 25 years. He discovered Reynolds Lifetime Aluminum Industrial Corrugated in 1949. He put his first 15,000 square feet on the Amityville School... then used it on the Copiague and Lindenhurst schools and on 13 other industrial and commercial buildings. Let him tell you why:

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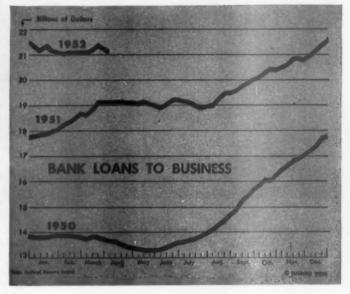
In Canada: Railway and Power Engineering Corp., Ltd.



to date from their 1951 lows. If a company with 10-million shares outstanding has experienced a rise of \$20 a share in that period, that means that the market is assuming that some time soon it will have uncovered on its properties some \$200-million of oil. How much oil is that, actually? Lately, producing companies have been selling in the market at roughly the equivalent of 60¢ per bbl. of reserves. So on that basis, to instify the rise, the company is going

to have to prove reserves containing some 330-million bbl. of oil.

• Payoff—Of course, some investors aren't going into "the oil plays" for the dividends. What they want is capital gains. The more earnings and depletion money a company plows back into extending its reserves, the more the stock will be worth later on. And, if you are in a high tax bracket, it may be worth waiting for the fruits of such a venture.



### Business Loans Hit the Downgrade

A good deal depends on how that top black line (chart, above) behaves during the next few weeks. It measures the business loans made by member banks of the Federal Reserve System. So far this year it shows a gentle decline. This is a return toward the normal seasonal pattern of business loans and a decided contrast to last year's sharp first-quarter rise. The decline has been caused: (1) partly by the decline of business activity in some lines, (2) partly by the fact that a lot of security issues have been sold lately to pay off existing bank loans.

Biggest Drop-For the latest available week (the one ended Apr. 2), business loans dropped more than in any other week for three years. Keep your eye on business loans during the next few weeks, because:

• If the black line continues to drop quite noticeably, metropolitan banks will be strongly tempted to shade the existing prime rate of 3% for short-term loans. • If they do that, it could affect all other bank rates. However, many bankers think the 3% rate will stick, at least till after June 15 tax date.

• Threat to Controls—If business loans continue to fall off (as they usually do from March to June), it would endanger the Voluntary Credit Restraint program, already weakened by President Truman's order exempting bond issues of local governments. In a deflationary period, banks would be less likely to consider any individual loan as inflationary.

The decline in bank loans has been a major factor in the general easing of short-term money rates (BW-Mar.29 '52,p172). This easeup is one good reason the U.S. Treasury has started to raise new money a good many weeks before money experts thought it would.

Realizing that investors, including banks, are looking for a place to put funds temporarily, the Treasury has decided to borrow new money while short-term rates are relatively easy.



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When they are safeguarded with
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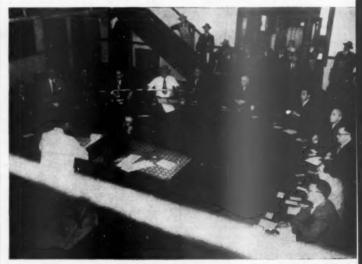
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# BYERS



PENNY ARCADE: Auctioneer "calls" stocks (a method once used in Wall Street and still popular in world markets) on Salt Lake City Stock Exchange. Speculators are going for



AUCTION: In this market method, the auctioneer calls off the list of stocks alphabetically twice a day. Brokers shout their bids and offers, close deals in public haggling.





the exchange's low-priced stocks. The lure: oil possibilities.

MARKING: Attendant stands by to post bid-and-ask quotes and volume of trading,

### Eastern Money Goes West

On the Salt Lake City Stock Exchange these days, names like Bontzana Mining, Bullion, Little May, Leonora, and Royston Coalition are magic. For the boom in oil stocks that has stimulated other security exchanges (page 132) has reached Utah. It started on Mar. 24, to be precise, the same day a 15-in. blizzard hit town. And it hasn't stopped yet.

The exchange has been a mart for mining shares ever since its founding in 1888. But now the interest is on the oil possibilities in some of these mining companies. Shares of companies actually producing oil haven't gained rapidly during the boom. Most of the play has been in companies that seemed to be swinging from mining to oil. Practically all of them are penny stocks, most selling below 10∉ a share when the boom started.

 Oil Greases the Way—The favorite companies, many of them dating back to the mining boom days of the 1890s, have picked up oil leases or royalty interests. Some of them have placed the hypnotic word "Oil" in their corporate titles. Prices of their shares boomed accordingly.

Royston Coalition, which jumped from 10¢ a share to 25½¢ during March, has since tapered off to 19¢ or 20¢. Royston's main holdings had been in Nevada mining lands. But it recently picked up some oil interests in Utah's Uintah Basin. A company that changed its name is Trans-Union Oil, formerly Union Chief Mining. In March its stock hopped from 7½¢ to 19½¢.

In 1948 commercial oil wells began production in Utah for the first time. Now major companies are reported planning further western explorations.

Where's the speculative money coming from? Salt Lake brokers say it's mostly from the East. One top broker says approximately 90% of his orders in March and April came from eastern buyers.

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April 7, 1952

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NOT A NEW ISSUE

300,000 Shares

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Price \$41.875 Per Share

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Stone & Webster Securities Corporation Union Securities Corporation

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April 8, 1952.

#### SEC's Rod

The commission suspends a Wall Street house from business for giving customers bum steer.

The Securities & Exchange Commission last week took the unusual step of suspending a Wall Street firm from the New York Stock Exchange, the Curb Exchange, and the National Assn. of Securities Dealers. The offender was the big house of Van Alstyne, Noel & Co., which does an underwriting and brokerage business. SEC ruled Van Alstyne off the turf for 20 days, starting April 24, then postponed the date to May 29. But the firm plans to appeal to the federal courts.

SEC said Van Alstyne had wilfully violated the antifraud provisions of the securities laws. The house, it found, made "false and misleading statements" while acting as an agent for Expreso Acreo Inter-Americano, S.A., a Cuban airline

• Bum Tip?—In May, 1945, the Wall Street house underwrote an issue of 300,000 shares of Expreso common, offered it for \$3 a share. SEC ruled that from June, 1945 to August, 1947, the firm had violated the laws by recommending Expreso stock.

According to the commission, Expreso's financial condition grew steadily worse after the stock issue. However, this was not at first reflected in the market price of the stock, which sold as high as \$13 a share in December, 1945, but later nosedived to a 2¢ bid in 1949.

SEC charges that Van Alstyne knew of Expreso's poor condition, but failed to disclose the facts to customers. It concedes that in September, 1946, Van Alstyne did inform customers of the facts. It took this into consideration when it imposed the penalty.

• In Defense—The house argues that, at the time of the alleged violations, almost everyone felt great optimism as to the future of the air transport industry.

Van Alstyne also has claimed in SEC hearings that most of the financial information given it by Expreso was given in confidence.

"We never indicated to anyone," says the spokesman, "that the company was making profits. Indeed, in the prospectus, we stated that the company expected to operate at a loss. We devoted time, money, and prodigious efforts to make a success of Expreso. Our firm has made no large profits in connection with Expreso."

This isn't the first time the firm has felt SEC's rod. Back in 1946, it was

suspended from the National Assn. of Securities Dealers for 10 days (BW-Mar.9'46,p64). SEC charged then that the firm had sold new stock of Higgins, Inc., prior to the effective date of the registration statement.

# Ramjet Stock

Public stampedes to become "partners" of the Rockefellers in Marquardt Aircraft Co.

The public had a chance last week to go into partnership with the Rocke-fellers on a speculative venture in a glamorous new industry—ramjets. Marquardt Aircraft Co., for the first time, offered \$300,000 worth of capital stock

to the market.

The 20,000 shares, priced at \$15 apiece, whooshed out the window like the guided missiles powered by Marquardt's ramjet engines. The company, located in Van Nuys, Calif., makes ramjets, a special type of jet engine, for the armed forces and for aircraft and aircraft-engine manufacturers. It offered the stock through C. E. Unterberg & Co., one of the smaller New York investment banking houses. Proceeds will be used to finance expansion. • Backlog-Marquardt says it had an order backlog of \$8.6-million at the end of January, and another \$1-million of contracts under negotiation. The future for ramjets is attracting attention since the armed forces have requested about \$780-million for guided missiles in the 1953 budget, compared to \$442-million for the current fiscal year. The company had net profits of about \$73,000 last year from sales of \$3.9-million.

Marquardt was started in 1945 by a group of engineers headed by Roy E. Marquardt. A well-known backer is Laurance Rockefeller. Through the help of the family research-and-analysis company, Rockefeller Bros., Inc., (BW-Apr.14'51,p25), Laurance has made other ventures in the aircraft and rocket fields. Two years ago the Rockefeller group acquired all Marquardt's preferred stock and most of the common from General Tire & Rubber Co. It also bought \$200,000 of 3% convertible notes, which were later converted into capital stock. There are now about 87,000 shares of capital stock outstanding.

 Air Tube—What's a ramjet? Basically, it's a tube into which burning fuel is injected while air is forced through at high speed. The air emerges much hotter and under much higher pressure than when it came in, giving a powerful forward thrust.

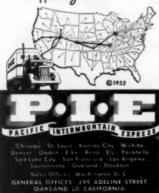




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# State of New Jersey Buys Commercial Paper

Walter T. Margetts, Jr., is treasurer of the State of New Jersey. Like any corporate treasurer, he believes in keeping the state's money working. When Margetts took office about three years ago, he found that at any given time somewhere between \$60-million and \$100-million of state funds were lazing about in commercial banks as demand deposits, earning no interest. Margetts switched as much of these funds as possible into 91-day Treasury bills and into time deposits in banks. Last year New Jersey earned \$14-million from this source.

• From GM-Last week Margetts announced a very unusual deal that would increase New Jersey's investment yield. He was buying \$12-million of nine-month commercial paper from General Motors Acceptance Corp., at 2½%. This is believed to be the first time any government body in the U.S. has entered the commercial paper market.

Margetts got the power to do this through a law he had just persuaded the legislature to pass. He was able to show that blue-ribbon corporate and educational bodies make a practice of buying commercial paper. It brings a higher yield than 91-day bills and can be resold without losing any accrued interest. That's a loss that could happen if the state were forced to draw on its time deposits in banks.

### FINANCE BRIEFS

Life insurance companies in 1951 carned 3.18% before taxes on their investments, says the Institute of Life Insurance. That's a climb from the 3.09% of 1950. But taxes reduced the net yield to 2.98%, compared with 2.97% in 1950. The boost in earnings was due to a shift from governments into industrial securities and mortgages. Higher money rates came too late to have much effect.

No new capital expansion: Alexander Calder, president of Union Bag & Paper Corp., says his company has no further expansion after the current program is completed in late 1953. Says he: "We see a recession by yearend that will probably run for two or three years."

Free parking near the door: A bank in midtown New York, the Trade Bank & Trust Co., is giving depositors an hour's free parking near the bank. The bank pays the 75¢ hourly fee.

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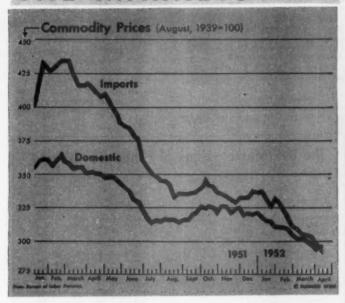
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# THE MARKETS



# **Deflation Hits Commodities**

Imports finally dip below domestic after long slide that began after Korean boom. Calming of war fears has played a large part. Wool, rubber, tin take worst beating.

Deflation, which has showed up in many comers of the U.S. economy hasn't spared the commodity markets. The chart (above) gives you the overall picture. After a long slide from the peak of the Korean buying boom in early 1951, spot prices of imported and domestic commodities leveled out in the fall for awhile. In February it became obvious that the downtrend in prices was on again (BW-Feb.23'52, p176). And it's kept on ever since.

Latest figures from the Bureau of Labor Statistics show that its price index for imported commodities, once high above the domestic price index, has just fallen below the domestic indicator. Following an ancient rule of market behavior, the imports led the decline because they had led the advance.

how commodity prices zoomed after the North Koreans invaded South Korea in June, 1950. Prices of imported materials went up faster than domestic prices. One reason was the strong possibility that the Reds might soon be in the rich tin and rubber areas of Malaya. Another was the chance that all imports might be endangered by enemy attacks on shipping. The gradual calming of these fears has done a lot to bring prices down. Imports have also had to contend with the same factor that has depressed domestic raw materials: big inventories.

We're talking in general terms, you understand. The deflation hasn't reached all commodities equally. Among the major imports, wool, rubber, and tin have been hardest hit. Coffee and cocoa remain near their top prices, due to none-too-ample supply.

Among major domestic commodities, hogs, hides, and fats and oils have taken a beating. But metal prices haven't changed for many months. Grain prices, in general, have stood up pretty well. In spite of a slowdown in the U.S. textile industry, cotton has firmed.

 Harvests—The reason for the strength in metals is fairly obvious. The strength in grains depends largely on the fact that the U.S. corn crop was rather short last fall, and wheat harvests were slim in other parts of the world (BW—

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Nov.24'51,p122). Grains have been nervous this week, though, due to the government's forecast of a good winter wheat crop.

The situation in cotton is a bit trickier. Prices have made a comeback, compared to last year, because the last U.S. cotton crop was quite a bit smaller than was once expected. Big exports have kept the growers from becoming too deeply involved in the selling troubles of the textile industry.

It's interesting to compare the weakness of hog prices with the strength in steers. Steers are dearer now than they were around yearend (\$35.37½ a cwt., compared with \$34.87½). But hogs have slowly drifted lower (from \$18.67½ to \$17). In spite of his balkiness about other things, the U.S. consumer will still spend money for red meat.

Brood Stock—Big reason for the weakness in hog prices: Farmers are cutting down their brood stock. Usually, the supply of hogs at slaughterhouses falls sharply after January. This year porkers are still coming to market in great numbers. Because corn prices are high relative to hog prices, farmers are cutting down on hogs.

Changes\* Date of Recent Level

# The Bull Market: Signs of Fatigue-or Worse

	Changes		Date of	Recent Level	
Stock Groups	In 1951	In 1952	Bull Market High	vs. Bull Market High	
Composite Index		+ 2.2%	Jan. 1952	- 2.0%	
All industrials		+ 1.8	Jan. 1952	- 2.0	
Railroads		+12.7	April 1952	- 1.1	
Utilities		+ 1.7	Feb. 1952	- 0.5	
High-grade commons		- 0.7	Jan. 1952	- 3.4	
Low-price commons		- 5.6	Jan. 1952	- 7.9	
Aircraft manufacturing		- 1.9/	Oct. 1951	-13.9	
Air transport		-18.44	Dec. 1951	-18.0	
Automobiles		+ 6.2	Mar. 1952	- 2.4	
Auto parts, accessories		+ 3.8	Mar. 1952	- 3.2	
Building materials	+19.0	+ 1.7	Oct. 1951	- 4.1	
Carpets, rugs	- 6.7	- 2.6#	Feb. 1951	-23.1	
Chemicals		- 3.7	Sept. 1951	- 9.9	
Coal (bituminous)		+ 1.0	Mar. 1952	- 3.4	
Confectionery		+ 2.1	Feb. 1951	- 4.6	
Containers (glass)		- 6.1#	Sept. 1951	-12.9	
Containers (metal)		+13.6	April 1952	At high	
Copper		- 9.2	Jan. 1952	-12.3	
Department stores		- 1.74	Sept. 1951	-11.0	
Distillers		-11.6#	Oct. 1951	-18.5	
Drugs (ethical)		- 5.0	Aug. 1951	-13.9	
Drugs (proprietary), cosmetics		- 1.5	Oct. 1951	- 9.7	
Electrical equipment		- 2.5	Sept. 1951	- 9.6	
Farm machinery		- 4.1	Oct. 1951	- 8.3	
Pertilizer		- 8.7	Oct. 1951	-12.1	
Pinance companies		+10.6	April 1952	At high	
5é. 10é. \$1 stores		- 2.5#	Oct. 1951	- 5.8	
Pood chains		- 1.34	May 1951	-11.8	
Food manufacturers		+ 0.45	Feb. 1951	- 7.4	
General chains		- 6.1#	Feb. 1951	-10.8	
Gold mining (U, S.)		+11.3	Feb. 1951	- 9.3	
Lead and zinc		-14.7#	Oct. 1951	-18.3	
Leather		- 6.94	Jan. 1951	-25.0	
Machinery		+ 1.0	Oct. 1951	- 3.3	
Metal fabricating		- 9.84	Oct. 1951	-16.6	
Mining and smelting		+ 0.8	Mar. 1952	- 8.4	
		- 1.3	Oct. 1951	-12.5	
Motion pictures		- 7.3	Sept. 1951	+ 8.7	
Office and business equipment		+49.2	April 1952	At high	
Oil—crude producers		+14.0	April 1952	At high	
Paper		- 2.5	Aug. 1951	- 9.4	
			-	-17.5	
Printing and publishing		- 2.2# + 0.4#	Peb. 1951 Jan. 1951	- 9.5	
Railroad equipment		-10.24	Sept. 1951	-19.4	
Rayon Shipbuilding		+ 6.1	Mar. 1952	- 1.1	
Shipping		+20.5	Mar. 1952	- 2.2	
				- 9.0	
Short		+ 0.16	Jan. 1951	-16.2	
Soft drinks		+ 2.34	Jan. 1951 Jan. 1951	-10.2	
Steel			Feb. 1951	- 9.5	
Sugar		+ 0.6#	Sept. 1951	-23.0	
Textiles					
Tires		+ 2.2	Oct. 1951	- 2.7	
Tobacco		+ 2.94	Jan. 1951	- 7.6	
TV-electronics		+15.2	Mar. 1952	- 2.4	
Vegetable oils		-11.2#	Aug. 1951	-12.2	
Data: Standard by Poor's weekly stock	price indexes.	* All change	s figured on	basis of 1950	

Data: Standard & Poor's weekly stock price indexes. All changes figured on basis of 1950 yearend levels. § Recent level was below 1950 yearend figure.

# MARKETING

# The 25 leading brewers are taking a bigger share of U.S. beer sales

Sales	Rank		Thousas	ids of bar	rels sold		
1950	1951		1950	1951	% Change		
1	1	Schlitz	5.097	5,716	+12.1	2000	
2	2	Anheuser-Busch	4,889	5,479	+12.1	16372	
3	3	Ballantine	4,375	3,990	- 8.8	10000	
4	4	Pabst	3,419	3,820	+11.7	0000	
5	5	Liebmann	2,662	2,800*	+ 5.2	773300	STATE OF THE PARTY
8	6	Miller	2,105	2,612	+24.1	0,0995	MARKET BATTER THE
6	7	Schaefer	2,652	2,600*	- 2.0	60000	
7	8	Falstaff	2,287	2,295	+ 0.3	1 POSCE	
9	9	Blatz	1,746	1,799	+ 3.0	1655	
10	10	Pfeiffer	1,618	1,555	- 3.9	1 1 1 1 1 1	
13	11	Ruppert	1,253	1,517	+21.1	1	1941 41.5%
11	12	Griesedieck Western	1,442	1,418	- 1.7		1947 46.0
12	13	Goebel	1,258	1,408	+11.9		The state of the s
14	14	Lucky Lager	1,096	1,242	+13.3		1950/ 55.2
17	15	Hamm	1,053	1,153	+ 9.5		1951 57.7
16	16	Schmidt	1,068	1.116	+ 4.5	2000	
15	17	Duquesne	1,081	1,094	+ 1.2		
23	18	Piel	767	1,090	+42.1	1-13/10-	
3	19	San Francisco	623	838	+34.5	1900	
22	20	Red Top	710	819	+15.4	THE PER	
20	21	Griesedieck	810	817	+ 0.9	10 Ministra	
21	22	Pittsburgh	800	806	+ 0.8	15.53	
19	23	Fort Pitt	963	802	-16.7	STATE OF	attraction to the
25	24	Drewrys	730	772	+ 5.8	10 178	
?	25	Gunther	601	745	+24.0	1000	

THE SCOREBOARD SHOWS:

# Beer Drinkers Like Them Light and Dry

The beer industry is keeping a weather eye on two brewers: Miller Brewing Co. in Milwaukee and Jacob Rupar these two were the pace-setters among the 25 ton-ranking companies.

among the 25 top-ranking companies.

During the year Miller boosted its beer sales 24.1% to move up from eighth to sixth place in rank among all brewers. Ruppert surged ahead about 21.1%, moving up from 13th to 11th place.

These were the most significant competitive changes in the beer picture, according to preliminary data just released by the Research Co. of America, New York. This organization's 11th annual Brewing Industry Survey, to be published next month, will show few changes among the top brewers from

last year, none among the leading five (table above).

• High Life Pays—The Miller story is an impressive one (BW—Sep.8'51,p68). In a decade its sales have more than trebled, a far better showing than any of the other dozen top companies. (Schlitz, by contrast, hasn't quite doubled over the same period, Ballantine is up less than half.) Miller's national distribution has only come about in the postwar years, in which time its sales have gone from 644,000 bbl. in 1946—when it was 20th ranking beer company—to 2.6-million last year.

Miller's success is due to Miller's High Life, a light, dry, high-quality beer that commands a premium price (it ranges from 25¢ to 75¢ a bottle). On top of this comes the fact that

Miller's management has been willing to play for high stakes. Since the war it has invested some \$25-million in expansion plans, has advertised and promoted heavily.

 Native's Return—Ruppert, on the other hand, is the story of a remarkable comeback.

Back before World War I, in the days when beer was virtually a local industry, Ruppert was the nation's No. I brewery. But after the repeal of prohibition, it slipped steadily behind the times, even losing out in the New York market. It made a basic error: It stuck too long with draught beer and a dark brew when national preferences had switched to a packaged beer that's light and dry.

Ruppert's comeback within the past



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"... Ruppert was back in the black for the first time in several years ..."

MARKETING starts on p. 147

year has been due to several factors: (1) better management, (2) the brewing of a lighter beer, and (3) the revival of a famous trade name—Knickerbocker—which Ruppert hasn't used in about 20 years, despite the fact that it has a great pulling power for New Yorkers through its sentimental associations.

Ruppert still has some way to go to recover lost ground. Output of 1.5-million bbl. last year wasn't up to the 1947 figure of 1.9-million bbl. But Ruppert was back in the black for the first time in several years, and it claims that its gain of 45,000 bbl. in sales during January was about half the industry's total gains for that month.

Modest Gains—All told, the industry's gains last year were on the moderate side. Total sales, according to the research company, were 83.7-million bbl., as against 82.8-million in 1950.

This was just enough to hold the per capita beer consumption at about the previous year's mark of 17.1 gal. And it was well below the postwar high of 86.9-million bbl. (or 18.4 gal. per capita) established in 1948.

Once again last year, as in every year recently, the big gains were made by the top-ranking brewers (table, page 147). The four biggest brewers accounted for 22.7% of total sales last year as against 21.5% the year previous. In 1941 the top four accounted for only 15.3% of the total.

• "Bigs" Take Over—The concentration of economic power in the hands of fewer and fewer brewers has been the major phenomenon in the beer industry for the past 20 years. It has been accompanied by a remarkably high mortality among local breweries, which have either been bought up by the larger ones or have simply disappeared. Back in 1914 there were some 1,400 breweries in the U.S. Last year there were a mere 386, a drop of 21 from the year before.

 Changing Times—What brought about this holocaust? Two of the major factors are highlighted by Ruppert's history:

Change of taste. Local breweries specialized for the most part in dark, strongly flavored brews modeled after the native beers of their foreign-born brewmasters or owners. But U.S. taste has vecred sharply to the light and the dry (BW-Jul.14°51,p102). This is the result of a lot of complex sociological patterns, including urbanization, wider consumption of alcoholic beverages by women, and similar factors. The big

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brewers, trying to appeal to a national market, turned to lighter, blander brews in order to find the greatest common denominator, hence the widest market.

This shift in taste can still be observed going on in New England today. That area is the last stronghold of alc. But even there, taste is veering toward the light and dry—and away from the stronger, darker ale.

Shift from draught to packaged beer. Back in the 1930s the ratio used to run 70-30 in favor of draught beer. Now it's just the reverse. Last year consumption ran 73.6% in favor of packaged beer (in bottles or cans), up from 71.8% the year before. The interesting thing is that sales of draught beer, in terms of barrels, are stuck at almost the same point they were a decade ago. In other words, all gains in volume have come via packaged beer.

Behind this lies a whole series of changes. State laws banning bar sales of liquor and beer helped do it, particularly in the South. So did the fact that draught beer is very good—but only when the bartender knows how to handle it, which all too few do.

• New Problems—Local brewers had trouble making the changeover. They were tied to the saloon system of distribution, by the barrel. Packaged beer meant a whole new set of marketing problems plus new packaging equipment as well. Moreover, it meant spending the kind of money on consumer advertising that only the big national brewing companies could afford to spend

• Decentralization—But there was still one point at which the local breweries had an advantage over the national brands—price. This stemmed mostly from freight rates, and with the increase in freight rates the local's price advantage has continued to increase. Beer is bulky and therefore is expensive to ship any distance. As a result, there has been a countertrend set up in recent years. That is, having gathered in the local breweries under one national roof, the big brewers are now decentralizing their operations by buying up or building breweries near the big markets.

In the past few years this trend has been particularly pronounced. Since early 1948 there have been at least a dozen major purchases of local breweries by big regional or national brewing companies.

Three brewers, for example, got a foothold on the West Coast: Pabst Sales Co. with the purchase of Los Angeles Brewing (BW-May29'48,p84); Altes Brewing Co. with the purchase of the Aztec brewery in San Diego (BW-Jul.17'48,p70); and Goebel Brewing Co. with the purchase of the Golden West brewery in Oakland.

Other major acquisitions: Schaefer's purchase of Beverwyck, Albany, N. Y.;



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Another move along these lines was Anheuser-Busch's invasion of the New York market with the completion, in 1950, of a major brewery in Newark, N. J. It has a capacity of some 1.3-million bbl. a year.

 Manhattan Comeback—This regional countertrend has already produced some decisive results. It has once again made the New York metropolitan area the No. 1 U. S. beer producing area (by a slight margin) since it yielded the crown to Milwaukee years ago.

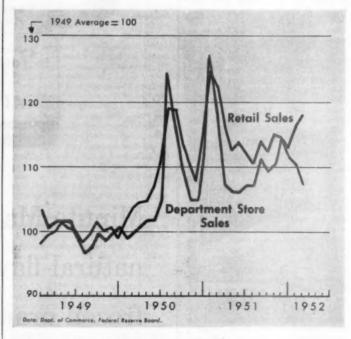
This yeasting has taken its toll of at least one major company. At least a part of Ballantine's slight setback in sales last year was due, observers believe, to losses in the New York market, thanks to the new and vigorous competitions.

tition from Anheuser and Ruppert. Beverwyck (now Schaefer) has also given it a run in New England, where Ballantine has been in trouble because it has always put strong emphasis on ale.

Counterattack—There is also another countertrend at work.

Some shrewd brewers have been able to capitalize on the fact that the light, dry beers have swept all before them. This leaves a small but important minority of unregimented palates that crave a stronger, tastier brew. G. Heileman Brewing Co. in La Crosse, Wis., is doing a brisk business, as an example, with a dark beer.

But in the scale of things, these are relatively minor operations. Industry observers think that this year two brewers—Schlitz and Anheuser-Busch will both plunge over the 6-million-bbl. mark for the first time and that Miller will hit the 3-million mark.



# Sales Yardstick Goes Way Off

Because department store sales figures are published weekly, everybody watches them avidly to see which way retail sales are going. Unfortunately, department store sales—at best never a very accurate indicator of total retail sales—have been particularly erratic since the Korean War.

As the chart above shows, they have been highly volatile. They have peaked above retail sales on the top of the buying booms, dipped lower in the troughs. Early this year the two lines really started spreading apart. In part, this was due to an upward spurt in automotive sales, which affected all retail sales but not department stores. Thus, department stores have been understating retail sales as a whole. The big question: Will the two lines begin to draw together again when the March returns are all in?

# Lone Wolves Match the Chains

Women's shoe chains, with their volume buying and central distribution, have had the edge over department stores. Now Saksplan offers the losers a remedy.

Chain stores handling low-priced, high-style women's shoes have been gradually cutting department and specialty stores out of the business. The explanation lies in the fact that the chains: (1) buy in huge volume, so each of their retail outlets can sell cheaply; and (2) since retailers reorder from the chains own warehouses, service on hot-selling items is fast. Today, as a result, the trade estimates that the chains are hogging 80% of the low-priced fashion shoe business.

• Competitor—Saksplan, Inc., New York, is a young organization that has thrived on the conviction that department stores and specialty shops can share the chains' advantages. Henry Mendelson, general manager and originator of the plan, figures that department stores have more customer traffic than a chain any day. Given a system of chain distribution and merchandising, Mendelson thinks, they should be able to capitalize on this advantage. Saksplan allows them to do just that.

Saksplan started three years ago with a modest 12 stores. This week it welcomed its 130th store into the plan—Packard-Bamberger, in Hackensack, N. J. By next fall it expects to count some 170 stores on its list. Saksplan started with one warehouse, in Boston. Early this year it added one in St. Louis: next August it expects to open a third in Los Angeles.

Saksplan says that some 60 of its member stores reported a 44.5% increase in shoe sales in 1951 over 1950. For the first quarter of 1952, some 90 stores reported a 36.3% increase over the same 1951 period.

• The System—Basically, Saksplan is a system of unit control of inventory—with Saksplan, as distributor, doing the controlling. Saksplan guarantees the stores a 35% markon, shoulders all the markdowns. It is not a leased department deal; Saksplan simply acts as the central distribution headquarters for the stores—much like the distribution center of a chain.

Typically, the plan works like this: Twice a year Saksplan gets together with the store-buyer to work out plans for the next six months' sales. The Saksplan man advises the buyer on quantity and styles-within the buyer's budget. Since Saksplan takes the markdown, it has a stake in seeing that the retailer buys wisely.

When the retailer sells a pair of Saksplan shoes, he tears a ticket off the box. The ticket shows the stock number, color, size of the shoe, and the store name in code. Twice a week—or oftener—the store mails the tickets to Saksplan. Saksplan merchandisers analyze them, decide whether the store ought to restock. If the answer is yes, the shoe goes out from Saksplan's warehouse without any order from the store.

If the shoe is going slowly or is a dud, Saksplan doesn't replace it. Instead, it may transfer the shoe to another store where that particular style is selling. Or it may decide that the retailer should mark down his price. In either case, Saksplan makes the decision, just as it decides on the original retail price of all its shoe styles. (Dressy types range from \$5.99 to \$7.99; casuals from \$2.99 to \$3.99).

Regularly, Saksplan bills the store for 65% of the retail price. If it decides the shoe should be marked down (this is usually done at \$1 a clip), Saksplan continues to bill the store at 65% of the sale price. Thus, even though the retailer makes a smaller dollar profit on the marked-down shoes, he still gets his 35%. A non-Saksplan store owner, by contrast, might lose his entire profit on a markdown. If the Saksplan shoe is cut to a preset floor and still doesn't sell, Saksplan takes it back and credits the store with the final price. Then Saksplan sells the returned shoes to an

outlet distributor.

• Popular Plan—Saksplan's suppliers are mostly New England manufacturers. Its brands are private—Charmettes and Modernettes in dressy styles, Country Cousins in casuals. Saksplan advertises them nationally every month in Today's Woman, provides retailers with free promotional placards.

Herbert Hare, buyer of moderatepriced shoes at James McCreery, New York department store, says his shoe department adopted the plan two and a half years ago. Today's volume is triple that of 1949's, he reports. The plan keeps his department full

The plan keeps his department full of lively sellers, keeps duds at a minimum. Because he's not stuck with the markdowns, he can afford to give a new fashion a bigger display—show six styles in purple shoes, for example, instead of three. He would like to get a higher markup than 35%: 40% is usual, he says. But he admits that the extra 5% Saksplan gets is fair enough considering the risk it takes.

A few stores that adopted the plan dropped it. Some didn't like to lose

# DANGER!

### A stranger may be your partner

How did an outsider get control of so much of your company's stock? Simple. Your vice-president died. His widow—because you couldn't raise the cash, or couldn't

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what she was doing —
sold her husband's stock
to an outsider.

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their control of inventory. Sometimes chain competition just proved too tough. But Hare feels the plan gives a department store a real edge on the

competition. Most women, he says, would rather say they got their shoes at a well-known department store than at a low-priced chain.

# THE MARKETING PATTERN

AST WEEK'S Federal Reserve Board study of consumer finances (BW-Apr.12'52,p19) poses a real problem for consumer goods industries.

It shows that people plan to spend even less than they did last year on cars, houses, major appliances, and the other big-ticket items. In other words, it raises a real threat that we aren't going to consume all the goods we are going to produce-unless people can be /

prodded into buying.

One way to prod automatically suggests itself to every businessman: more advertising, more promotion, more merchandling. The Federal Reserve Board's study will make the "hard sell" even more fashionable than it has been (BW-Mar.15'52,p22). Advertisers will spend more money than ever before in history on magazine and newspaper space, radio and TV time, promotional gimmicks, sales

HIS, HOWEVER, will not be enough, as most marketing men today realize. They know that, even though you can't sell goods without advertising, that alone won't do the job when the public is reluctant to buy. It takes more than a pitch. Sellers of consumer goods will have to give the public the things it wants at prices it is willing to pay.

And that's where the real rub is. The Fed's survey shows that one of the chief obstacles to buying today is prices. The consumer has money to spend, but he thinks that prices are too high anyway.

ARD GOODS producers, in general, are trying two approaches to the problem. Both are essentially methods of avoiding

the price problem.

The first is best illustrated by the appliance industry, which is beset by the problem of "saturation" in radios, refrigerators, and the other older appliances (BW-Mar.15'52, p30). Manufacturers are now tending to take the emphasis off these fields. They know that saturation means price-cutting-and

means low profits for everyone.

Instead, they are moving into the new, comparatively unsaturated fields-dryers, air conditioners, dishwashers, garbage disposers, and the like-where profits are high.

These are only harbingers of the flood that's to come. A vast new industry is going to be built about air conditioning (BW-Jan.5'52, p9). Other exciting possibilities in the way of new products are in the works. A good example is Elgin's new electronic watch, a gadget so revolutionary it has other watch makers biting their finger-

SECOND FORM of hard A goods selling can be seen best in Detroit.

The car makers have been confident right along that they can sell cars. They see a good solid market for a long time ahead based on the huge number of jalopies rattling down U.S. highways and the money jangling in people's pockets.

The Federal Reserve's study may shake Detroit somewhat, but probably not enough to pry it loose from its current marketing plans.

For example, when Ford began to plan several years ago for the return of honest-to-goodness competition, it didn't think in terms of prices. Instead, it began laying plans for larger, flossier, more luxurious, and more be-chromed cars than ever before (BW-Feb.23'52, p157).

So you can probably count on seeing the car makers throw more horsepower, more gadgets, more chrome into the forthcoming battle for sales. If and when price competition returns in a big way, look for it first on the dealer level. Detroit figures that there's enough padding in dealer margins to let price-cutting go on for some time before the car makers themselves have to get into the battle.

S FAR AS the hard goods people go, things will probably have to get a lot tougher before they'll see any reason to change their present strategy-based on the concept of a rich economy.



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Steel mills and foundries need

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Not just "production" scrap from metal-fabricating plants . . . but also all sorts of idle iron and steel—from all types of plants. Search your plant for this idle metal . . . work with your local scrap dealer to increase supplies of badly-needed iron and steel scrap.

### What to look for . . .

obsolete machines, tools and equip onsoste machines, tools and equipment, no-longer-used jigs and fix-tures, worn-out or broken chains, wheels, pulleys, gears, pipe, tanks, drums and abandoned metal structures. Non-ferrous is needed,



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### MARKETING BRIEFS

Magazine advertising revenues for the first quarter of 1952 hit a record of \$122.9-million, says Magazine Advertising Bureau. That's a 10% increase over the same 1951 period.

Loeser's store in Brooklyn, N. Y. (BW-Feb.16'52,p24), went to J. W. Enterprises for around \$2-million. The new owner is a realty corporation headed by Joe Weinstein, president of J. W. Mays, another Brooklyn store (BW-Jan.19'52,p141). Weinstein doesn't plan to move in. His purpose: to find a 'substantial tenant" who will help keep the Fulton Street shopping area going.

Family Shopper Magazine is a new twist on the mail order business. It will be distributed free to franchised furniture stores, which mail it to their charge account customers. The magazines contain mail order blanks addressed to the stores, which will display all items advertised in Family Shopper. The customer orders the items from the store, but they're shipped direct from manufacturer to customer.

Department stores' markons for 1951 were 38.6%, lowest in 16 years, says Controllers Congress of National Retail Dry Goods Assn. Expenses rose 1.1% to 32.6%, highest since 1941. Volume was equal to 1950's, but net profits for stores with more than \$1million volume dropped 1.4% to 2.4%

Variety store chains had an aggregate net profit of 4.4¢ on each \$1 of sales in 1941, Fairchild News Service reports. That's against 5.5¢ for the same 12 firms in 1950. Total sales volume was at a peak, \$2.1-billion, against just under \$2-billion in 1950.

### The Pictures

· Cover-Raymond P. R. Neilson Bakelite Co.-45 Jack Birns, Space-82 Brown Bros.-94 (bot. lt., bot. ctr.) Culver-64 (bot. lt.) Eastern-102, 103, 104 Joern Gerdts-140 (top). Int. News-60, 64 (bot. rt.), 65, 74, 112, 171 Bill Preston-106 Charles Rotkin, P.F.I.-154, 155 Standard Oil Co. (N. J.)-64 (top) United Press-28, 55 Universal Pictures-32 Wide World-116 Wolters-52, 126



Twice each day it was necessary for a large Eastern steel producer to shakedown his furnaces. This caused high concentrations of dirt which resulted in severe air filter maintenance and inefficient air conditioning.

FARR Company, when called upon for a permanent solution, recom-mended a FAR-AIR\*\* Self-Washing Filter. This proposal was followed and an installation made. After two years of use, the results are very satisfactory and another FAR-AIR unit has been installed in the same plant.

The unit was set to automatically wash and re-oil itself just prior to the time that the furnaces were shaken down. Thus, maintenance was virtually eliminated and the filters were always at peak efficiency.

FAR-AIR Self-Washing Filters can be furnished to handle any CFM requirement. If you have a special air filtration problem, Farr engineers will help you find the proper solution. Write for complete information to Farr Company, P.O. Box 10187 Air-port Station, Los Angeles 45, Calif.



# BUSINESS ABROAD



MINING: Bauxite will be scooped up by earthmoving equipment operated by Jamaicaus Reynolds company has trained for job.



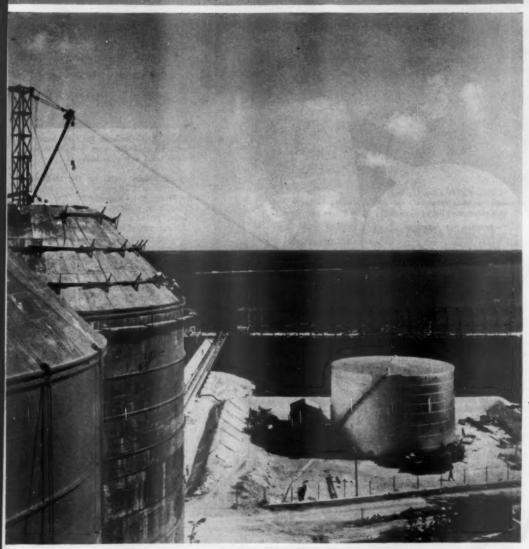
DRYING: Ore is dried and pelletized in these rotary kilns. Jamaica bauxite is easier to get at, has much less impurity than U.S. variety.



CARRYING: Six-mile aerial tramway carries ore to the sea. Conveyer navigates rugged country, including 2,000-ft. ridges.

# Jamaica Pasture Land Pays Off in Bauxite

In 1942 a cattle-rancher in Jamaica, British West Indies, discovered to his surprise that he was ranching smack in the middle of a big deposit of bauxite (aluminum-bearing ore). Later exploration increased his surprise: The scrubby Jamaica pasture land turned up some 300-million tons of bauxite—the largest known reserve in the world. To the U.S. and Canadian aluminum



SHIPPING: Tramway delivers ore to storage silos (left), conveyer belt carries it to loading dock (background) on Jamaica's north

coast. Self-unloading vessel will carry ore to U.S., return with fuel oil for drying plant at the mines. Tank (right) holds the oil.

industry, expanding by leaps and bounds and dependent largely on imported ore, the find was a godsend.

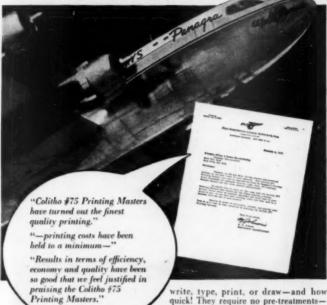
• Big Yield—This spring—Just 10 years later—the Jamaican discovery will begin paying off. Any day now, Reynolds Jamaica Mines, Ltd., subsidiary of Reynolds Metals Co., will complete construction of its \$17-million-plus mining establishment in Jamaica (pictures). Big

steamshovels and draglines will begin stripping the reddish, powder-like ore; then, around the first of June, the first shipment will journey the 1,000 mi. to the U.S. Gulf Coast, to be turned into aluminum metal at Reynolds plants.

For its first year of operation, Reynolds hopes to mine 750,000 tons of bauxite from its 35,000 or so owned and optioned acres in Jamaica. Trans-

late that ore tonnage into aluminum ingots—at roughly a four to one basis—and you get 200,000 tons. Last year Reynolds produced around 248,000 tons, is shooting for a production rate of 415,000 tons by mid-1953. Some of that new aluminum tonnage will end up on the U.S. stockpile. Reynolds got an \$11-million advance for its Jamaica investment from ECA, payable

# NEWS FROM PANAGRA ABOUT COLITHO



People in all kinds of businesses enjoy the happy experiences which Mr. O. Z. Johnson, Maintenance Superintendent for Pan American-Grace Airways, describes in his unsolicited letter. They know because their offset duplicating too, is on the high quality level attainable with Colitho Plates and Colitho Offset Duplicating Supplies.

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RANCHING: Reynolds has 6,000 head of cattle on its 35,000 acres, is trying to improve breed with prize bulls.

in aluminum metal for the stockpile over the next 20 years.

• More to Come—Later this year there'll be a lot more bauxite arriving from Jamaica, from other producers. Aluminium, Ltd., the big Canadian holding company (Aluminum Co. of Canada is the biggest subsidiary), is putting \$40-million into Jamaica facilities, building an alumina plant right on the spot to process the ores (Reynolds will handle its bauxite in a plant now going up at Corpus Christi). Kaiser Aluminum & Chemical Co. is on the seene, too, hopes to start shipping 1-million tons of bauxite annually from its 17,000 acres by fall.

• Everybody's Happy—The aluminum industry is pleased as punch with its Jamaica reserves. For one thing, they're nearby—only a hop, skip, and a jump to U.S. Gulf ports. Today three-quarters of U.S. bauxite comes from abroad, mainly British and Dutch Guiana (2,500 mi. away), and Africa. And, too, U.S. reserves of bauxite (total: 60-million tons) are dwindling. • Good Neighbor—The Jamaicans are

pleased, too. Not only are the foreign companies' mining activities bringing new prosperity, but two of them—Reynolds and Aluminium—have launched payate Point 4 projects. Reynolds, for example, is the largest cattle-raiser in the West Indies.

In getting close to 40,000 acres, Reynolds had to buy ranch and farm houses, and herds of cattle on the land. Only 10% of that acreage, Reynolds figures, will be actually opened for mining. So Reynolds went to work improving the cattle breed, imported prize specimens from the U.S. It leased land—free of charge—to Jamaican farmers, has helped them learn modern farming techniques. It's pushing diversifica-

ing techniques. It's pushing diversification, experimenting with tobacco, citrus, other crops. Eventually, Reynolds believes, it will have more people farming than bauxite mining on its Jamaican

property.

# Out of this

# cocktail shaker greater engine life

 Any similarity between this large Cooper-Bessemer piston and a cocktail shaker is no coincidence.

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Realizing this, Cooper-Bessemer engineers thought of the "cocktail shaker" principle—and put it to work? Instead of simply "flowing" oil through, the piston was designed so that the cooling oil would slosh around the entire inner crown area, picking up more heat, faster! Sure enough, it has helped bring about records of ring and liner life never equalled.

This is typical of the engineering work that goes on constantly at Cooper-Bessemer... where no engine advancement is too minor to get attention, no sound idea too big to tackle. When it comes to heavy-duty power, you'll be ahead if you take advantage of the new things being done by one of America's oldest engine builders.

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# Bolivian Revolt: Did U.S. Blunder?

- Nationalists seize power in bloody struggle, promise to take over Bolivia's tin.
- Latin Americans call last week's upheaval a sharp defeat for U.S. policy.
- What's more, they say we brought it on ourselves by refusing to pay Bolivia's high price for tin.

In Congress early last week, Sen. Dennis Chavez (Dem., New Mexico) railed against what he terms the "stupid and disastrous" U.S. policy in the price deadlock with Bolivian tin producers. He said it was hurting U.S. prestige all over Latin America. He warned that a grave crisis might come in Bolivia.

Two days later Bolivia erupted in revolt-one of its bloodiest. By the week's end, the ruling military junta was deposed, a nationalistic, reputedly anti-American government installed. Its leaders promise expropriation of the foreign-owned tin mines as their step.

There are plenty of factors-outside U.S. tin policy-that contributed to the explosion in Bolivia. But, rightly or wrongly, Latin Americans almost to a man feel that if the U.S. is hurt by the revolt, it has only itself to blame.

### I. Tin Price Deadlock

New boss of Bolivia is Victor Paz Estenssoro, head of the "National Revolutionary Movement," most powerful force in Bolivia with the possible exception of the army. Tabbed the MNR, Paz's group is a conglomerate of right and left extremists founded by dictator Gualberto Villarroel, who came to power in a coup in 1943; then was lynched from a La Paz lampost during a popular revolt in 1946. Paz Estenssoro fled to Argentina, where President Juan Peron made a cosy place for him in the Argentine banking sys-

In Bolivian presidential elections a year ago, Paz Estenssoro (still exiled in Buenos Aires) and his MNR were way out in front. They had a firm hold on the nation's 40,000 tin miners and talked of nationalizing the all-important tin mines. But the army had different ideas about Bolivia's future. It mounted a coup that voided the elections and installed a military dictatorship under Gen. Hugo Ballivian (BW-Jun.9'51,

• RFC Balks-It was tin, Latin Americans say, that brought the MNR to power last week. Nine months ago Bolivia demanded \$1.50 a lb. for its tin, which makes up 70% of the na-

tion's income, and fully 90% of its foreign exchange. The U.S.-through the Reconstruction Finance Corp. refused to pay the price. Though the Bolivians have retreated from their \$1.50 price (they'll take \$1.30 now) and the U.S. is considering offering them more than the going U.S. price (\$1.215), the negotiations are still stalled. Bolivians claim their tin is hard to get at, costly to produce, and that they're the only really dependable source of supply that the U.S. can count on when the chips are down.
Washington counters that the price is unreasonable, that there's a limit to how far we can go in dishing out foreign purchasing funds. One angle: Under contracts with Indonesia and Malaya for tin (now \$1.18 a lb.), we would have to boost the price to match that which we give any other nation.

Meantime, tin is piling up on the docks in Chile. And Bolivia hasn't been earning any foreign exchange to pay for imports of food and other essen-

• Peron's Role-There's been talk that Argentine dictator Peron had a finger in the MNR revolt. Actually, there's little or no evidence to support the rumors. But the Peron regime is hastening to capitalize on the developments. Argentine government papers have hailed the revolt as a "victory of the people," offered "solidarity" with the MNR, welcomed the "emergence of another nation from the Yankee yoke."

Peron and Paz Estenssoro have several things in common. Each draws the bulk of his support from the workers, each inveighs against "capitalist imperialism" as the prime enemy of his nation. Beyond that, you can't draw much comparison. Paz's MNR has been called everything-Nazi, Communist, totalitarian, fanatically nationalistic. In the last war the Paz group cooperated with the U.S., despite the pro-Nazi label. Today it numbers Communist agitators in the tin mines among its supporters.

The MNR government promises to respect all international agreements and provide early elections, has told Bolivians that hard work and sacrifice are needed to repair the nation's nearbankrupt economy. Tin policy-whether or not the MNR will follow through on its promise to nationalize the mines -is the big question. Revolutionary leaders tell Bolivians that "we are going to endeavor that the Bolivian economy shall be for Bolivians and not for the three exploiters that live abroad." They're talking about the Patino, Hochschild, and Aramayo interests that control the tin mines.

### II. Over a Barrel

Washington admits that the Bolivian coup is a blow to U.S. prestige. But it hasn't shaken Washington's confidence in its Latin American economic policy. Officials insist that we've been fair and square and that we won't kunckle under to unreasonable prices for raw materials purchases.

So far, Washington doesn't expect a repetition of the Iran crisis in Bolivia. Paz Estenssoro just can't afford the kind of nationalistic antianything binge to which Iran's Mossadegh has been treating himself. Iran is nearly selfsufficient in food and basic needs; Bolivia isn't. It must sell tin to pay for imports-and that means largely to the

Estenssoro must get a tin deal soon. Bolivia has been borrowing on tin piled at the dockside, has managed to realize about 75¢ a lb. on it to pay for the most essential imports. But that can't keep

• Point 4-The U.S. has some other economic levers in Bolivia. There's a Point 4 development and technical assistance program under way in public health, farming, mining. The Export-Import Bank is putting some \$20-million into highway improvement. Prior to the coup, private U.S. investors were beginning to take a more active interest

Bolivia won't be able to tap its potentially rich resources and raise the living standards of its dirt-poor people, without U.S. help. Anti-U.S. policies, tin nationalization, if it comes, might scare off any kind of cooperation.

### III. Repercussions in Chile

The Bolivian mess has touched off a new barrage at U.S. policy from one end of Latin America to the other. Washington's price policy is called economic aggression"; the old saw that we prefer to help other parts of the world, disregarding our Latin neighbors, is back in currency with a vengeance.

Neighboring Chileans are especially bitter. They warn that U.S. failure to pay more for Chile's copper will cause

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TERRITORIAL INFORMATION DEPARTMENT
Marquette Building—140 South Dearborn Street, Chicago 3, Illinois

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS

a Bolivian-style blowup there; Chileans will use Bolivia to stiffen their own demands. Labor in the nitrate and copper industries, needled constantly by Communists, is strengthened—there's a copper strike deadline next week, perhaps a nitrate strike May 1. Meantime, left-wingers continue to plunge for nationalization of the U.S.-owned copper mines.

Chileans are using politics as a lever, too. They're nervous about the upcoming national elections, where ex-dictator Ibanez del Campo (an avowed friend of Peron's) is a strong candidate. Ibanez, it is feared, will try to undercut Chilean democracy, weaken ties with the U.S. He's counting on unbridled inflationnow running away with Chilean living standards—to help him sweep into office.

### BUSINESS ABROAD BRIEFS

Had enough: Panamerican Life Insurance Co., a New Orleans corporation operating in North and Central America, has pulled out of Guatemala after 30 years doing business there. Reason: a tough new insurance law that, among other things, forces insurance companies to invest at least 40% of their reserves in Guatemalan government bonds. Twenty-seven other U.S. and foreign insurance outfits in Guatemala are wondering what to do.

Reindeer steaks may ease the lot of meatless Britons. There's an experiment afoot to raise reindeer in the Scottish highlands; a nucleus herd of eight has already arrived from Sweden.

Competition from Japan is hurting the silk searf industry. This week the Assn. of Textile Screen Makers, Printers & Frocessors asked for a boost in tariff rates, claimed that Japanese-made printed silk searves have taken 60% of the business over the last five months.

A handy manual of tax and trade laws abroad has been published by Matthew Bender & Co., Inc., Albany 1, N. Y. It comes in loose-leaf form, features bimonthly, up-to-date supplements on all kinds of tax laws in 64 countries.

Plants Down Under: Monsanto Chemicals (Australia), Ltd., is expanding its facilities to produce agricultural chemicals and plastics heretofore imported into Australia. Krilium, the wonder soil conditioner (BW-Jan.19'52,p107), may be manufactured there, too. . . . Chesebrough Mfg. Co., New York, has broken ground for a 45,000-sq. ft. factory near Melbourne, will start producing Vaseline products there by mid-1953.



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Infinite care goes into every one of Crucible's more than 400 special purpose steels. These steels are so specially compounded to meet individual requirements, that the majority of them cannot be mass produced. That's one of the many differences between Crucible special purpose steels and what we ordinarily think of as Steel.

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# INTERNATIONAL OUTLOOK

BUSINESS WEEK APRIL 19, 1952



The silence from the tents at Panmunjom is almost deafening. Yet many U. S. officials still expect a Korean truce—soon.

These observers hint that the main outlines of the truce already have been tacitly agreed on. The United Nations now is taking a last, long look to make sure the pact contains no obvious traps.

But this optimism isn't universal. Some thoughtful Washington people wonder whether the Chinese really prefer a truce to keeping our troops snarled in Korea indefinitely.

The truce—if it comes—will probably shape up like this:

- We'll permit some military airfield construction in North Korea. (We'll try to limit that construction to bases the Air Force thinks it can knock out handily if new fighting comes.)
- We hope the Chinese will withdraw demands that Russia serve on the "neutral" truce supervision team in exchange for our airfield concessions.
   If they don't, we'll accept Russians on the team provided it isn't limited to neutrals.
- We think the Reds will agree to let the U. N. tinker with its prisoner lists.
   Unlisted prisoners or civilians who want to go north will be substituted for those afraid to return to the Communists.

Fairly reliable reports from Hong Kong indicate that Communist China may have some economic reasons for wanting a letup in Korea.

The West's curb on exports seems to be pinching Chinese industry. Plants are closing for lack of rubber, oil, steel. Some of the strategic railway projects in the north have bogged down. Food output in the south is off, has sparked scattered peasant uprisings.

But don't count on this to blow up into a serious domestic crisis for Mao Tse-tung. His control continues to be complete (B'N-Dec.22'51,p93).

The West will take its time replying to last week's Soviet proposal for Big Four supervision of all-German elections.

Washington, London, and Paris are frankly stalling for time. They hope to get the Bonn government's O.K. to the "contractual agreement"—tieing West Germany to the Allies—within a few weeks. And so far, Stalin's hazy offers on German unity haven't roused decisive West German opposition to the integration scheme.

We'll reject Russia's Big Four formula. Our note will recall the delays and frustrations of Four Power talks in general, and of the joint administrations of Berlin and Vienna. We'll repeat our demand for U. N. investigation of the elections.

But we won't allow West Germans to get the idea we've slammed the door on their unity hopes. We'll press Moscow to come clean on what Four Power supervision would mean. We'll prod them on the touchy issue of the East German territories now occupied by Poland.

The diplomatic battle for Germany is just beginning.

Stalin may keep upping his bid until he achieves his objective—blocking West German rearmament. He might play the trump cards: Permit free unification of Germany, or even promise return of the eastern lands, if nothing else will do the trick.

# INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK APRIL 19, 1952 Washington, however, doubts that Stalin will go that far when the chips are down.

A number of British merchants and manufacturers are ready to test
Communist offers made at the recent Moscow economic parley. The Reds
said they would buy some \$80-million worth of textiles, shoes, etc.

But the general reaction is cool. It's expected that when samples and quotations reach Moscow the Communists will find the goods unsuitable, too expensive. Washington, too, believes very few of the deals discussed at the conference will go through.

The fact remains that, as a political weapon, Moscow's wooing of business will be troublesome to the West. For example, the promise of fat eastern markets adds spice to Soviet offers of German unity.

France's Premier Pinay has exactly one month to show the results of his "Save the Franc" program. The National Assembly reconvenes May 20.

It will give the Pinay program a thorough going-over.

Pinay is trying to prevent price increases, smoke out hoarded capital, float new government loans. Success during the next month will mean good chances for a period of stability for troubled France.

A Pinay failure would bring another spell of hectic political jockeying, continued inflation. Devaluation of the franc might follow.

Pinay's problems aren't solely domestic. The Tunisian row is sure to plague him next month.

The Assembly is split down the middle over Tunisian policy. Leftists, Communists, Socialists, and even some members of Foreign Minister Schuman's MRP, oppose use of troops and mass arrests in Tunisia. Rightists, generally, support the tough policy, won't yield any concessions to hard-pressed Tunisian nationalists.

How to write a Tunisia policy acceptable to most Tunisians and the Assembly's majority is Pinay's problem. Right now it looks well-nigh insoluble.

Tunisia is troubling the U.S., too. A storm of protest from Arab and Asian nations went up this week when our U.N. delegation abstained on voting for a hearing of the Tunisian case.

The Arab-Asian bloc lost. Washington felt it had to back France—at least not vote against it. We just can't take a chance on weakening such an important ally (BW-Apr.5'52,p132).

But our abstention boosted bitter criticism of U.S. foreign policy in the Middle East, Asia, North Africa.

Significantly, two of our firmest allies in Latin America—Brazil and Chile—voted with the Arab-Asian nations for a Tunisia hearing.

Washington is already worried about U.S. influence south of the border. It regards the Estenssoro revolt in Bolivia (page 158) as a sharp blow.

The U. S. has strong cards to play in the event of trouble in Latin America. Nearly every nation there is heavily dependent on the U. S. economically. But any kind of showdown increases bitterness, weakens the hemisphere as a whole.





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# REGIONS



HUGE FIELDS of lignite lie almost unused in North Dakota. Now industries are wooed ...

# Lignite Power Rouse

When electricity costs in the area of 3 mills per kwh., even the biggest industrial power users—aluminum reduction plants, processors, and the Atomic Energy Commission—can generally get along. For industries that use smaller amounts of power, the rate is an absolute bonanza.

On that fact of life industry-hungry North Dakota is basing new hopes of getting itself some factories—and the payrolls that go with them. The state is sure that it can produce ultra-cheap power by using as fuel its vast deposits of lignite—low-grade brown coal. It can show pretty good evidence to support the claim.

• Largest Reserves—Lignite is what North Dakota has the most of—600-billion tons of it, according to the U. S. Geological Survey. That adds up to the largest coal reserve in any state, even after you allow for only 50% recovery, and for lignite's low heat value, a mere 7,000 Btu. compared with, say, 13,000 Btu. for bituminous. Roughly, North Dakota's recoverable lignite reserves are equivalent to 165-billion tons of bituminous. What's more, much of it can be reached by surface mining.

Lignite is not an economical fuel when it has to be shipped any distance. The low heat value and high (37% on

the average) moisture content mean excessive rail costs. But if you can burn the lignite right at the mine, it's another story.

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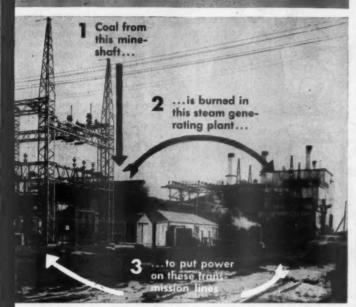
That's why the would-be builders of industrial North Dakota have launched a drive to sell the idea of lignite-fired powerplants. So far, action has followed three main lines:

• The Chicago engineering firm of Vern E. Alden Co. began studies of just what it would cost to produce power under specified conditions. Wrapped in ifs and buts, the Alden studies envision plants producing power at 2.86 mills and 2.57 mills per kwh. Men with local experience in making power with lignite don't find the figures too hopped up.

the figures too hopped up.

News that the Atomic Energy
Commission was looking for a new
plant site spurred North Dakota's Sen.
Milton Young to action. AEC was interested and took a long look before ruling out the state in favor of Ohio (page
174) for technical reasons. North Dakota's backers haven't given up hope,
though.

 Leading businessmen in Minneapolis and St. Paul have formed a committee to press North Dakota's case, especially with the AEC. The committee is well aware that cheap



. . . with talk of cheap power from lignite-fired stations like this one at Beulah.

# orth Dakota's Hopes

power alone isn't enough to attract industry. North Dakota is remote from major markets and from raw materials—in this instance, notably bauxite. Against this, the committee balances the hope that oil discoveries in the Williston Basin (page 132) will mean a general stirring up of industry.

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# I. What the Engineers Say

The Alden Co. prepared studies of two powerplants, an 800,000-kwh. station such as the AEC might require, and a 240,000-kwh. job, adequate, say, for an aluminum processing plant. Both sets of estimates were based on a location next to a lignite mine, eliminating all fuel haulage.

For the 800,000-kwh. station, Alden figured that a private company would need \$120-million capital, most of it plant investment. The plant would burn about 4,920,000 tons of lignite a year, at a modest per ton cost of \$1.15. Adding in other production costs, the drying and pulverizing of the lignite, along with overhead and fixed charges, Alden figured that the cost of producing electricity would be 2.86 mills per kwh. That works out to \$23.78 per delivered kw. year on the basis of a 95% load factor.

That can be tried on for size against the 3.5 mills per kwh.-or \$29.05 per kw. year at 95% load factor-that will be paid by the new AEC plant being built at Paducah, Ky. (BW-Jul.7'51, n84)

• Tars and Oils—The Alden study comes up with an alternative version of the big plant. Lignite is a rich source of tars and light oils, suitable for chemical processing and similar industrial uses. These tars and oils could be removed by low-temperature carbonization; the resulting char would be fuel for the power station. Alden estimates an annual oil and tar production of 89-million gal., salable for at least 5¢ per gal.

Allowing for increased investment in the carbonization plant and necessarily greater consumption of lignite, Alden still figures that the byproduct sales would bring the over-all power costs down to 2.57 mills per kwh. And every time the price per gal. of the tars and oils rose one penny, the delivered power cost would be reduced by about 0.16 mills.

• Smaller Plant—In figuring on the 240,000-kwh. station, Alden used a different set of premises. Here, the study assumed that the builder would have a government certificate of necessity for

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Now, even more than then, with the increased tempo of transportation, a dependable electric system is important as the motivating power, the source of adequate lighting.

Recently, Ward Leonard VITROHM bracket terminal resistors were installed in the fluorescent lighting systems of the new subway cars for three major reasons.

First, they could withstand the

wear and tear of constant vibration and shock of starts and stops. Secondly, they could be installed

faster and easier in limited space. In the third place, although these resistors last indefinitely, they must be readily replaceable in case of accidental damage.

The builder provided pre-wired terminal studs. By using a bracket terminal resistor it was possible to combine mounting and electrical connection in one simple, fast installation for the 600-volt d-c current.

Ward Leonard's engineering department can help you solve your electric problems, too, by the proper selection or adaption of controls.

rapid amortization during the first five years of operation.

Capital requirements were set at \$48.3-million, with 80% of the plant cost being amortized in five years. The plant would use low-temperature carbonization of lignite. But for this plant, a 6¢-a-gal. value was assumed for the recovered tars and oils. Lignite costs were put at \$1.15 a ton.

On this basis, the delivered cost of power for the first five years would be 5.9 mills per kwh. Thereafter, with fixed charges shaved way down by the rapid amortization, the delivered costs

would drop to 1.5 mills.

### II. What Production Men Say

Men with lots of experience in using North Dakota lignite to produce power don't regard Alden's studies as pipedreams.

A station with a firm load of 150,000 kw. "should give a 3-mill rate," according to H. C. Cummins, first vice-president of Northern States Power, which uses 350,000 tons of lignite a year in four power stations. Cummins puts the fuel cost at about \$1.40 a ton, way over

Alden's \$1.15.

· High Costs-Another vardstick is offered by Montana-Dakota Utilities, a large user of lignite for power generation. Mondak has a small (18,000 kw.) station at Beulah, N. D., whose delivered cost is 5.38 mills per kwh., not allowing for depreciation and other costs. Fuel costs inflate this figure for, although the station is right at the mine, the coal has to be brought from underground and most of the equipment is relatively old.

• New Co-op-At Voltaire, N. D., a 45,000-kw. steam power station is just being put into operation. The \$8-million station was designed by Alden Co. for Central Power & Electric Cooperative; it went on the line for 10,000 kw. of its load two weeks ago. The station buys its lignite from a mine about 8 mi.

Even with the rail haul, the delivered cost of the lignite is only \$2.11 a ton. Over-all power cost will run about 4.85 mills per kwh., the figure including interest and amortization of a 2% Rural Electrification Administration loan over

According to Alden, the power cost for a similar station built with private capital would be 1 mill per kwh. higher. · Survey-Last summer the North Da-

kota Research Foundation surveyed 20 steam powerplants using lignite, and then drew these conclusions.

• A 250,000-kw. plant could be constructed at a cost of \$125 per kw., or less

· Such a plant, located at a mine and enjoying a high load factor, "can produce electric power at a cost not to

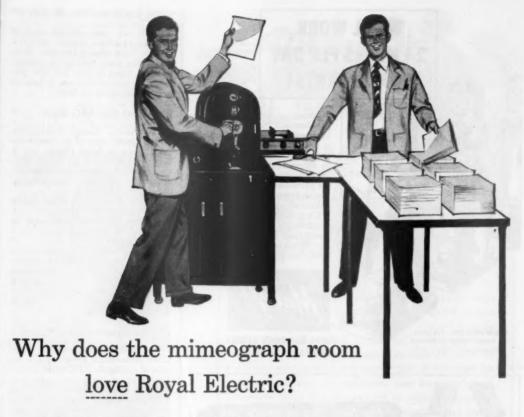
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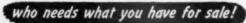
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· If the most efficient existing plant (a 15,000-kw. station) were located at a site offering the most favorable lignite costs, total power produc-tion cost would be only 3.55 mills per kwh. This estimate does not include interest, depreciation, or taxes.

### III. What the AEC Said

The Atomic Energy Commission made a careful study of the potentially cheap power in North Dakota, and it liked much of what it saw. In the end. the answer was no, for reasons inherent in the AEC itself rather than in lignite power generation.

• The AEC project would require a large amount of interim power, before a new generating plant could be completed. North Dakota simply hasn't got such power.

· AEC could not contract for the needed power for a sufficient number of years to pay off on a multimilliondollar installation. If AEC stopped taking the power, there would be nowhere in North Dakota to dispose of such a large volume.

### IV. The Committee's Hopes

The informal committee of Twin Cities businessmen refuses to give up hope of getting the AEC to reconsider. The names on the group's roster lend weight to whatever it says.

The chairman is J. Cameron Thompson, president of Northwest Bancorporation. Other members include: John M. Budd, president of the Great Northern Railway; G. A. McNamara, president of the Soo lines; R. S. MacFarlane, president of the Northern Pacific: B. F. Braheny, president of the Northern States Power Co.; F. R. Gamble, treasurer of the Montana-Dakota Utilities Co.; Julian B. Baird, president of the First National Bank of St. Paul, and Gordon H. Murray, president of the First National Bank of Minneapolis. Others are Goodrich Lowry, president of the Northwestern National Bank, Minneapolis; Henry C. Crosby, vicepresident of General Mills, Inc.; Harold W. Sweatt, president of Minneapo-lis-Honeywell Regulator Co.; Gideon Seymour, executive editor of the Minneapolis Star & Tribune; Dean A. F. Spilhaus of the University of Minnesota Institute of Technology; P. R. Doelz, president of Kalman & Co.; and Fred A. Irish, chairman of the First National Bank of Fargo, N. D., and treasurer of the Greater North Dakota Assn.

· Resources-The committee is working hard to draw on several other large power users known to have been interested in the North Dakota cost studies. It's not simply that they want to attract industries; they're also saddened by the relatively slight use made of the state's enormous fuel resources.

If more users can be found, it will be no trick to get at the thick seams of lignite, generally lying close to the surface. A typical deposit is covered by 30 ft. of sand and shale overburden. Then comes a 64-ft. seam of lignite, a "parting" of 15 ft., and another 8-ft. seam of lignite. Once mined, it's easy to dry and pulverize, for it does not coke.



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# ... Underground

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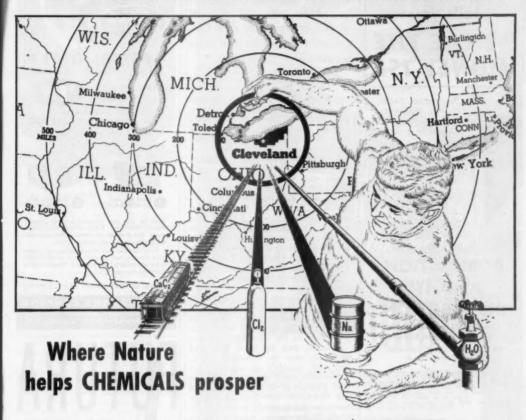
Salt Lake City has had just about as much wild life as it can take. Residents have asked the State Fish & Game Commission to do something about the several thousand deer that have transferred their winter quarters to the Beehive State capital.

Last winter's deep snows (117 in. by Mar. 25) made it impossible for the deer to feed in their natural habitat. It didn't take the animals long, however, to sniff out the expensive shrubbery in the residential section of the city. Before state officials could set up feeding areas, the hungry ruminants had chewed off most of the ornamental hedges. Meanwhile, home owners were wrapping their bushes in everything from table cloths to nightgowns.

Once in the urban mood, the deer wandered down to the business section. One of the deer created a little unscheduled cross ventilation in a department store by leaping through a windowmussing up a pair of twin beds, wrecking a lamp, coffee table, and a TV set (total cost: \$425)-and departing by another window.

Game officials decided that a longer deer hunting season was indicated.

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# Cold Shoulder

AEC may put a new atomic energy plant near Cincinnati or Louisville. The cities would rather do without.

One day a few weeks ago residents of Okeana, a small Ohio town 25 mi. northwest of Cincinnati, saw a couple of government surveyors wandering around the neighborhood. The tidbit of news filtered into Cincinnati. By last week the city was jumping with rumors: Atomic Energy Commission was going to spend \$400-million (or \$800-million, depending on which rumor you happened to hear) on a giant new plant to be put up practically in the city's back yard.

About 100 mi. down the Ohio River, meanwhile, in Louisville, Ky., the same thing was happening. Government surveyors had been seen around there, too. They were picking a site, rumor had it, for a plant that would cover 2,000 acres, take 10 years to build, and employ 30,000 construction workers in the process.

Harried Ohioans and Kentuckians in Washington buttonholed AEC, found that the rumors were true. AEC was indeed planning to put up a big plant somewhere in the Ohio-Kentucky area –preferably near the Ohio River and

preferably near an industrial center. But AEC wouldn't say where.

Normally, you'd expect two towns in that situation to vie for the prize. But not Cincinnati and Louisville. They had seen what happened to other towns when atomic energy plants went up nearby (BW-Nov.10'51,p88). Both of them have nervously dispatched delegations to Washington to talk AEC into building its plant somewhere else.

• Cincinnati's Troubles—The two towns have a long list of reasons for preferring to see each other—or some-body else—get the plant. The Cincinnati Chamber of Commerce issued a statement of its own particular nightmare, asking six questions to which it apparently saw no answers:

• There are already a number of defense industries in Cincinnati, and labor is getting scarcer. The AEC plant's 30,000-worker needs will really tighten the supply. What's going to happen to the city's other defense and civilian industries when this takes place?

 Assuming that the bulk of these 30,000 workers will come from other parts of the country, how is Cincinnati going to house them?

The city's hospitals are already carrying a peak load. How will they take care of the additional population?
 How are the schools going to

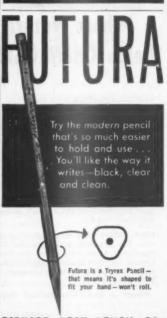


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 A big atomic energy plant needs access roads all its own. How can this be arranged to avoid fouling up Cincinnati's present highway system?

cinnati's present highway system?
Industry is already thick enough around Cincinnati to make it a high-priority target for an enemy air attack. How is anyone in the city going to sleep at night when an AEC plant goes up right next to everything else?

In addition to these problems of Cincinnati, the state of Ohio as a whole had something to worry about: Electric power requirements of the proposed plant are rumored to be 1.8-million kw.—more than the present output of the entire state. AEC's policy, when it moves into an area, is to use existing power facilities until it can get its own built. During this interim time, the load on Ohio's power capacity promises to be uncomfortably heavy.

Louisville's Troubles—Like Cincinnati, Louisville is worried about labor, housing, schools, and the possibility of becoming too juicy a target for enemy A-bombs. The city also has a problem

all its own:

Industrial plants around Louisville are arranged something like a horseshoe, with only the eastern and northeastern side—the east Jefferson County area—left open for residential expansion. If AEC decides on Louisville for its plant, it will probably build in precisely that locality. This would bottle the city in completely, leaving nowhere for additional housing to go up.

tional housing to go up.

Residents of the east Jefferson County area have already held four neighborhood meetings and one communitywide mass protest meeting. Property owners, especially, are up in arms; they're afraid the new plant will lower the value of their land, notably in the high-class residential districts.

 The Silent One—AEC, during all this time, has been watching the proceedings with considerable interest but keeping mum. Beyond admitting that it's going to put a plant somewhere or other in the disputed area, it has given

out no information at all.

AEC has had its surveyors poking around several other parts of Ohio and Kentucky, but the loudest rumors still insist that either Louisville or Cincinati will be the spot. The proposed plant will need water and coal in big quantities; thus AEC will undoubtedly pick a site somewhere in the Ohio River Valley. Further, AEC is looking for an area that will be able to (1) provide interim power till the plant can arrange its own facilities, and (2) use the tremendous amount of added power when and if the plant closes down.

All those requirements are met to a T by Louisville and Cincinnati.

• Soothing Voice—AEC thinks the two cities are making a mountain out of a





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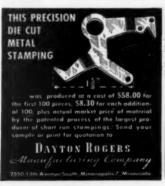
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"... local business doesn't have to compete with the government plant ..."

NEW AEC PLANT storts on p. 174

molehill. M. W. Boyer, AEC general manager, says, "We heard the same arguments when we located atom plants at Savannah River in North Carolina and Paducah in Kentucky (BW-Jul.7 '51,p84). Once construction was completed there were no complaints."

Boyer pointed out, specifically, that government policy on AEC and similar plants is to pay construction workers no more than the prevailing wage level in the particular area. In this way, local business doesn't have to compete—at least in regard to wages—with the government plant. Then, too, once the plant is built the construction workers go away, and employment dwindles to a moderate-sized core of permanent workers. In the case of the proposed Ohio-Kentucky plant, Boyer says this core will consist of 6,000 workers. "Labor and housing problems," he insists, "will not be insurmountable."

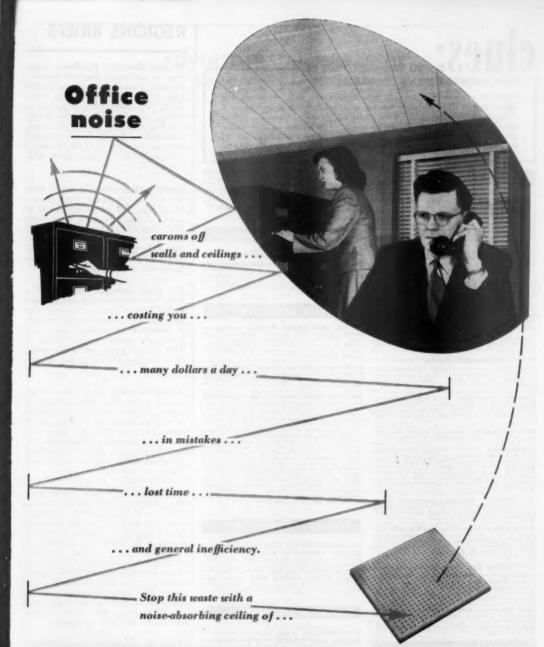
• The Optimists—There are a number of people who are more willing than Louisville and Cincinnati to listen to Boyer's soothing voice, and to think in terms of the business boom AEC's plant will bring to its adopted town. Among these are the Green River Valley Association in western Kentucky and a group of coal men in the eastern part of the state. These and other areas and towns are lobbying energetically

in Washington.

Inside the two nervous cities themselves, there are parties of insurgents who think the plant will be much more boon than disaster. In Cincinnati, for instance, there are the Retail Merchants Assn. and the Building Trades Council (AFL). Both these groups, along with everybody else, have representatives hounding AEC in Washington. They think the plant would be an excellent thing for the city. Several other Cincinnati business interests back this idea. Attorney Robert Ziegler, representing these interests, says he thinks the pessimistic chamber of commerce with its six unanswerable questions "did not speak for the vast majority of Cincinnatians.'

• Suspense—AEC does not expect to announce its choice of site for several weeks. It says, though, that it may soon put out a release on the specific requirements of its new plant. When that release comes out, residents of the beleaguered cities may get more exact clues on AEC's thinking. Until then, though, the arguments and the rumors and the trips to Washington promise

to continue unabated.



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# REGIONS BRIEFS

Western Resources Handbook, brainchild of California's Stanford Research Institute, is scheduled to appear in early July. It's a "technological audit of the West," will contain data on natural resources, manpower, population trends, water and power supply, industries, distribution. It will be in loose-leaf form so that new data can be added continually. Subscription price: \$250 a year.

Spanish potatoes may be barred from the U.S. if the Maine Farm Bureau has its way. The bureau has learned of several shipments coming from Spain (BW-Apr.5'52,p139), is afraid they may carry European potato diseases that so far have been kept out of the U.S. Powwows on the subject are under way in Washington.

Hot spring water piped two miles to a hotel bath may soon attract customers to Hot Springs National Park, Ark. The Jack Tar Hotel, which opened recently, is connected by insulated pipes to a Water is government-owned spring. 143F when it comes out of the spring. cools less than 10F on its way through the pipes.

Sewage treatment along the 160-mi. stretch of the Ohio River from Huntington, W. Va., to Cincinnati, Ohio, is now controlled by a single set of rules. The eight-state Ohio River Vallev Water Sanitation Commission has formally adopted a code of requirements for all industries and towns that pour sewage into the water.

A proposed \$83-million bridge across the Delaware River from Camden, N. J., to Philadelphia, Pa., is running into opposition. Jersey side of bridge would end near Camden's Fairview Circle, a big traffic focal point that is already severely congested. Residents of Camden would rather see Delaware River Joint Commission build a tunnel under the river, letting out half a mile below the circle. Commission would prefer bridge; tunnel cost is estimated at \$107-million. The matter is now before the two states' governors.

Truck tax reciprocity between Pennsylvania and Ohio has been canceled by the latter. The Ohio Public Utilities Commission took the action after Pennsylvania imposed an 8-mill tax on all trucks operating in the state. Now Pennsylvania trucks and buses operating in Ohio must pay these taxes: \$20 per truck unit; \$30 per tractor; \$4 per passenger seat on buses.

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Agency—Ayers & Assoc, Ins. 3rd Cover 1718 ELEVATOR CO	1
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(KAYLO DIV.) Assocy—Ewell & Thurber Assoc. Assocy—Ewell & Thurber Assoc. Assocy—Brisscher, Wheeler & Staff	4
PENNSYLVANIA SALT MFG. CO	1
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PITHEY-BOWES, INC.	0
PITTSBURGH CORNING CORP	
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THE POTTER PRESS	
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REICHHOLD CHEMICALS, INC	ė
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WESTINGHOUSE ELECTRIC CORP.	4
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# Seizure Is What It's Called

The unfolding steel controversy, climaxed by the President's seizure order, had in it the same quality of inevitability as a Greek tragedy. The antagonists—the steelworkers and the companies—were ready to risk a test of strength. The Administration, politically indebted to the union, wanted a settlement that would grant the union's demands without a compensating breach in the price control front. But it didn't want an interruption in defense production—nor did it want to use the Taft-Hartley act—so seizure emerged as the only and inevitable way out.

Whether the President has the power to act as he did is for the courts to decide. Congressional authorities have serious doubts. So, apparently, does the President, if one is to judge by the curious message he sent Congress the day after he ordered seizure. That he chose to use the seizure power in this situation raises a grave issue for American industry and for this country.

The President's speech to the nation announcing seizure of the steel plants was an inflammatory utterance. He denounced the steel companies as "greedy." He defended, with dubious arithmetic, the recommendations of the labor and public members of the Wage Stabilization Board as fair and justified. He said nothing at all about the controversial union shop, which the WSB finding favored. It is scarcely possible to conceive of a more acrid atmosphere for bargaining than that which the President's provocative address created.

The crisis broke over whether the Administration would allow price adjustments adequate to compensate for cost increases under the WSB formula. The President at Key West had led Charles E. Wilson, the defense mobilizer, to think it would. Later in Washington, Truman reversed his decision, said there was no basis for price relief based on the WSB's award. Wilson resigned in protest.

President Truman's action boils down to this: Under the threat or actual fact of seizure, the Chief Executive is authorizing increased costs without increased revenues and is thereby appropriating profits. In the name of price control, he is instituting profit control. Heretofore, the government has levied on business revenue via the tax system and the renegotiation procedure. Now there is a third way. It is an ominous one.

The President's action is a dramatic example of the trouble our kind of mixed economy can get into. Government, in the name of economic stabilization, takes over the functions of the market. Parties to an industrial dispute are no longer permitted to settle their differences. Government intervenes to determine costs and selling prices. The reason now is that "the national security is at stake." And that is a compelling reason, indeed. But we must face the fact that the present emergency may last a decade.

This insidious development, bringing government into industrial disputes, has been aided in recent years by the willingness of one party in these disputes, labor, to use friends in government to gain its ends. Government loses all semblance of a sovereign authority representing all the people. It becomes a machine to be put to the use of those who can capture and control it. But the tragedy for labor, or any other group, is that at another time under another occupant of the White House, the use of this power might be hostile instead of friendly. The more often resort is made to the White House for the settling of industrial disputes, the deeper the groove of precedent is worn. And in the process, the vitality of our system is sapped.

Tyranny is not apt to come in this country by open, forcible seizure of power. It will come imperceptibly, if ever, in small steps, one reinforcing the other. It will come in part because grasping politicians abuse their power. It will come in part because individual citizens and groups are willing to gain their short-run goals by whatever means is at hand. The steel seizure is a perilous step in that direction.

# New Trap

Out of the propaganda noises of the Moscow Trade Conference, one note comes clear. We are edging ahead in the cold war. We must hold to the policies that make gains for us.

Stalin called the Trade Conference for two reasons. First, Western embargoes against trading with Russia are now really hurting. Second, signs of business slow-down in certain Western countries give him fresh hope that he can split cold-war allies apart.

We know this. Stalin knows it. But he's not admitting it. He is now trying to hide hurts with tactics meant to prove that he wants peace through trade.

He points this new Communist line at his worst enemies, the practicing capitalists. Every man who would like to sell to Russia is now supposed to urge his government to loosen up on cold war trade bars.

Economically, the Communist offer to expand trade is largely a paper proposal. Politically, it is a baited hook. Wise businessmen will see it as a bid for business sympathy, and refuse to get caught.

The new Kremlin move underlines our basic dilemma. We believe that Communists and non-Communists must learn to live together, yet we urge that these trade offers be turned down. As long as Stalin holds to his policy of world conquest, a change in his tactics is merely a new trap. The break in the dilemma and the safe acceptance of new trade offers can come only when the Soviet shows real proof of its desire for peace. Deeds, not words, will call that turn.

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# WYER...here's some <u>chemistry</u> for your fence"

It was long, long ago that Tom Sawyer enlisted a corps of juvenile helpers to whitewash Aunt Polly's fence in Hannibal, Missouri.

In recent years, more than whitewash has been needed to preserve the world-famous "Tom Sawyer fence" which stands on the original site. Some of its posts and planks had begun to rot.

So it was that the Mark Twain Municipal Board called in a new group of Tom Sawyer's helpers recently . . . the woodpreservative chemists of Monsanto.

We like to think that all of Mark Twain's characters—Tom, Becky Thatcher, Huck Finn, Aunt Polly—were looking on with approval as Monsanto Penta (pentachlorophenol) made the fence safe from rot and deterioration for years to come.

Odds are you haven't any historically famous fences that need protection against rot, decay or termites. But you may need to safeguard your investments in new or old buildings, loading platforms, poles and posts, bridge decking, heavy and expensive timbers of all kinds.

Such structures can be made to last years longer by using Penta-pretreated lumber, or by applying a formulation of Monsanto Penta (also known as Santophen 20) . . . the cleanest, easiest-handled, most efficient of all wood preservatives.

It's available under many brand names in hardware, implement, cooperative or mail order stores. Monsanto Chemical Company, St. Louis 4, Missouri. In Canada: Monsanto Canada Limited, Montreal, Vancouver Santophen: Reg. U. S. Pat. Off



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